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Apples and Pears

The forthcoming conference of the Australian Apple and Pear Council which opens at Sydney on October 25, is fraught with great possibilities for more effective service to the industry. The agenda is a lengthy one, and deals with exports to England and the Continent; grading regulations; trade treaties; trade with India and the Near East; freight agreement; mutual quotas with New Zealand; better spaced arrivals of ships in U.K.; advertising in U.K.; educational publicity campaign in Australia, etc. The report by the chairman, Mr. J. B. Mills as regards his mission to London this year, will be awaited with great interest.

Many of the problems confronting the industry are known, including that of the better standardisation of the Australian pack, and also the vexed question as to the better spacing of arrivals of vessels conveying fruit from Australia.

There can be no question as to the close relationship between export and local marketing in Australia. The problems are inter-related, and cannot be separated. The Export Council gave a lead in dealing with the matter of educational publicity, and some good service has been rendered in this connection. This educational publicity campaign needs to be continued. Only a bare commencement has so far been made. Also the campaign needs to be started earlier in the year, when fresh Apples can be obtained.

With the prospect of diminishing export markets, the need is all the more urgent for specialising on the Australian market. It is quite certain that fresh avenues for the better disposal of fruit in Australia can be opened up.

There is urgent need for a market survey in Australia, almost particularly one would say in Melbourne, where vast quantities come into the Victoria Market for sale by growers direct to retailers. The figures should be ascertained: they are very interportant. It is understood that an economist from the Melbourne University has this matter in hand. The earnest hope is expressed that the difficulties of the situation can be overcome and accurate figures obtained.

:: :: ::

Still again there is the matter of production. It is known that in all the States there are trees which are unprofitable. These may be from half an acre to five acres or more, but in the aggregate there must be an acreage probably producing a couple of million bushels of Apples annually—but just the poor quality stuff that is the curse of the whole business. This is the rubbish that clogs the sale of the better quality fruit.

If a programme could be devised by which these neglected trees could be destroyed, it would be of constructive service to the whole of the fruit industry throughout Australia.

Apple Week in Melbourne

Recently the Victorian Publicity Committee of the Australian Apple and Pear Council conducted a highly successful Apple Week in Melbourne.

About 150 shops were decorated with charmingly arranged baskets of Apples and Pears. These were accompanied by window cards describing the health qualities of the fruit and particulars of the varieties. Apple Week was officially opened by the Lord Mayor of Melbourne by a broadcast talk.

These displays created great interest and were most favorably commented upon. During Apple Week there were radio talks on Apples and health by well-known citizens, and there were also demonstrations of the preparation of Apple salads by the Housewives' Association and cookery demonstrations by the Gas Co. and Electricity Commission. Many favorable press notices were published.

The chairman of the Apple Week Committee was Mr. Frank Petty, the others on the Committee being Messrs. F. Moore, H. J. Noonan, W. A. Thiele, F. Cave, and R. E. Boardman. Mr. Reg. Morriss, of the Dept. of Agriculture, supervised the decorating of the baskets of fruit, and received high commendation from the Committee in doing so. In the actual work of the preparation of the baskets, many local growers, their wives and daughters, rendered splendid service.

The whole effort was thoroughly worth while, and it points the way for similar service next season. The recommendation of the Committee is that Apple Week should be held earlier in the year, when Apples and Pears are fresh.

The Committee desires to express appreciation to the following for assisting with the funds for Apple Week: Corrugated Fibre Containers Pty. Ltd., Gerrard Wire Tying Machines Ltd., Ramsay and Treganowen Ltd., Lycett Pty. Ltd., Australian Berry Baskets Co., R. Werner & Co. Pty. Ltd., Ronaldson Bros. and Tippett, H. C. Pannifex & Co., Buzacott Sprays Pty. Ltd., Victor Leggo and Farmers Ltd., Blyth's Chemicals Pty. Ltd., Orchard Sprays Pty. Ltd., W. Angliss & Co. Pty. Ltd., Vacuum Oil Co. Pty. Ltd., Shell Co. of Australia Ltd., Neptune Oil Co. Ltd.,

Letter to the Editor

To the Editor of the "Fruit World."

Sir,—

What a poor fish the orchardist appears to be; he is faced with rising costs and gets low returns, but does not appear to be able to do anything about it. Other primary producers are having better times, but not so the Apple grower.

In ordinary business there is a difference of 50 per cent. between the wholesale and retail prices, it would be interesting to know what is the accepted difference in the fruit trade.

The poor prices this season in Australia are due, to a great extent, to the policy of the Apple and Pear Export Council. The Council, in its policy of restricting the export of Apples to England, has left enough fruit to glut the home market, formerly our best market. The Council in its efforts to improve the English market were blind to the effect that the large carry over would have on the home market. The Apple and Pear Export Council deals mainly with export, therein lies its weakness. Efforts to improve prices in England might well prove disastrous to prices in Australia. Will the A. and P. Council advocate the same plan of action as that taken in England to be taken in Australia, that is, advertising plus restriction? To be logical, the Council should. An economist on the Council would be a great help.

The fact remains that a new market must be found, and failing this, the alternative will be to grub out fruit trees and restrict planting. There is no doubt that we grow too much for our present markets, given favorable seasons. If the growers do nothing, they will just muddle along until enough growers go bankrupt and their orchards go out, and so the cycle will go on.

Of new markets, Germany offers most hope. She used to buy a million cases, but she certainly will not buy unless we buy from her in return. So the question becomes political, and it is the duty of growers to put their case before the Government.

As regards the restriction of production, to put it plainly, the grubbing out of fruit trees and restricting planting, the restriction policy is already carried out in the sugar and rice industries in Australia. Mr. Casey, the Federal Treasurer, in a recent article on America said: "The chief instrument of agricultural recovery (in America) was crop restriction supplemented by crop failures." He also said: "The fact remains that in times of depression farmers are given to vain attempts to increase their incomes by increasing their output, which only serves further to depress prices." Secondary industries do not do this, and yet nurserymen report good business this year. Fruitgrowers would do well to ponder over his words.

The time is overdue for an investigation of the whole of the Apple production by an economist, anyone connected with the industry could not see with an impartial eye, being blinded by their own particular viewpoint and interest.

It is up to fruitgrowers to face the facts and not blindly hope that next season will be better.

Yours, etc.,

"SMALL GROWER."

Ringwood, 18/9/37.

[Discussion on Small Grower's letter is invited. The Apple and Pear Council comprises delegates from State Associations. Has Small Grower placed his views before his State Association for transmission to the Council? There are many who think the Council has made a valued contribution towards better marketing in Australia. Much yet remains to be done.—Ed. "F.W."]

PERSONAL

Mr. J. B. Mills, President Australian Apple and Pear Export Council, returned to Melbourne per R.M.S. "Oronsay" on October 4.

Mr. A. U. Tonking, M.L.A., President of the N.S.W. Apple and Pear Export Association, and chairman of the Sydney Publicity Committee of the Australian Apple and Pear Council, was among those who gave broadcast talks on Apples and Health during September.

Mr. W. A. Thiele, President of the Southern Victoria Fruit Growers' Association, recently resigned from the Executive of the Victorian Fruit Marketing Association owing to pressure of other engagements. A resolution of appreciation for Mr. Thiele's services has been recorded in the Association's minutes.

Mr. G. W. Brown, President V.F.M.A., was examined for an operation for appendicitis during September. The operation was deferred but Mr. Brown was ordered away for a rest, and it is pleasing to know that he has recovered his normal health.

Mr. B. Flewell Smith, manager, Committee of Direction of Fruit Marketing, Brisbane, visited Adelaide, Melbourne and Sydney, at the end of September. One result has been the closer unity of fruitgrowers' co-operative organisations, which forward fruit in bulk to the main Australian markets.

Mr. Vic. Lawford, of Blackburn, recently paid a "flying" visit to Sydney in connection with fruit distribution. He found air travelling speedy and comfortable.

Mr. K. Weeding, manager, S. J. Perry & Co., Melbourne, who has been on a visit abroad, returned per R.M.S. "Oronsay," on October 4.

Mr. H. W. Soothill, manager, Producers' Markets Co-operative Limited and the Mount Barker Fruitgrowers' Cool Storage Co-operative Society Limited, also Joint Secretary of the W.A. Fruitgrowers' Association, is leaving for a short visit to London on October 11.

VICTORIAN FRUIT MARKETING ASSOCIATION.

The annual meeting of the V.F.M.A. will be held in the Board Room, Commercial Travellers' Association, Melbourne, on Friday, October 8, at 2.30 p.m.

An address on Fruit Marketing in U.K. will be delivered by Mr. J. B. Mills.

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The better quality of NEPTUNE Sprays is always obvious by comparison with others. NEPTUNE Sprays conform to the highest standards, and they are consistently uniform in strength and quality. Successful orchardists recommend them. Try them yourself and prove that they're better !

NEPTUNE PREPARED RED SPRAYING OIL ("A," "C," or Heavy Base)
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They return rich dividends in the way of sound, clean marketable fruit. Pest-free certificate with each consignment if desired.

C. J. Goodman Picnic Point Nurseries Bairnsdale Victoria

Spraying for Insect Pest and Disease Control

CONTROL of CODLIN MOTH and BLACK SPOT

Apple and Pear Demonstration Plots 1936-37

Summary of an Address by Mr. J. L. Provan B.Agr.Sc. (Horticultural Research Officer), at Vermont Field Day, September 16, 1937.

IN OUTLINING THE WORK being carried out by the Department on the Apple and Pear demonstration plots last year, Mr. J. L. Provan, Horticultural Research Officer, addressed a large gathering of growers.

Mr. Provan stated that the work as judged by the results obtained, and by the keen interest that the growers had taken, was considered very satisfactory.

The problem of establishing 24 demonstration plots in all the principal Apple and Pear districts in Victoria, had been a big undertaking, particularly when it is realised that the total areas of these plots comprised 58 acres, with 12 varieties of Apples and five varieties of Pears. The various climates met with in different parts of the State, and the variations in the equipment and personnel in the districts, increased the task of the Department's officers in securing the good results.

Detailed descriptions of the plots and the work carried out have been published in the August and September numbers of the Journal of Agriculture for this year, and were also published in the "Fruit World."

The work, Mr. Provan continued, comprised black spot control, codlin moth control, and fertiliser plots and cool storage investigations; the latter for the purpose of determining the effect of district, fertiliser treatment and spray programmes, on the keeping quality of the fruit.

These plots were undertaken because the Department felt that a large number of growers were not obtaining uniformly satisfactory results in the control of black spot and codlin moth.

The Department felt that by a series of such plots the grower was more likely to be convinced of the effect of the recommended schedules, and it also provided growers and officers an opportunity to co-operate more efficiently in dealing with cultural problems generally.

Mr. Provan then outlined to the growers the results obtained, with the recommended black spot spray programmes. The highest infection of black spot on any plot occurred on a block of 32 Delicious Apple trees sprayed with the "C" schedule. This schedule consisted of two Bordeaux mixture sprays, a full strength (6:4:40) applied at the green tip stage, followed by a 3:3:50 Bordeaux mixture spray applied at the early pink. This spray gave excellent control early in the season, but did not give sufficient protection against the late development of spot in the early Summer. These Delicious trees were very large, and it appeared that the tips of the leaders did not receive sufficient spray.

In a district like **Drouin** it is necessary to continue the black spot sprays throughout the early Summer, and not rely on pre-blossom Bordeaux mixture sprays only, for control.

By comparison, the Delicious "B" programme, also a block of 32 trees which received a green tip 6:4:40 Bordeaux mixture followed by three lime-sulphur sprays, showed only 1.6 per cent. infection.

At **Stanley**, Granny Smith Apple trees sprayed with the "C" schedule showed 3:3 per cent. spot, and London Pippin sprayed with the "B" schedule, 2.4 per cent. spot.

On all the other plots the infection was lower than 2.4 per cent., and in the majority it was so low as to be negligible.

Codlin Moth.

Mr. Provan then described the work undertaken on the demonstration plots to control codlin moth. The Apple plots in the southern districts comprised 26½ acres scattered over nine different centres with eight varieties of Apples. The average infection over this area, including all "stings" and windfalls, was 5.4 per cent., which must be considered a very satisfactory figure. **Northern Apple plots** in six different centres, and with seven varieties, comprising a total of 12¼ acres, showed an average infection of 15.8 per cent.

This rather high result was due principally to heavy infections in the western districts, namely **Quantong, Pomonal and Amphitheatre.**

At **Harcourt** on four acres, the average infection was only 6.7 per cent. On the southern Pear plots, in four districts, with three varieties totalling 7½ acres, the average infection was 0.27 per cent., and in the northern Pear plots situated in five different centres, with five varieties totalling 11⅛ acres, the average infection was 2.9 per cent.

Two principal programmes for the control of codlin moth had been demonstrated on these plots. For the Pears, straight leads only were used, but on the Apples a straight lead programme was demonstrated alongside straight lead sprays followed by white oil emulsion sprays. The results of both programmes were considered satisfactory, and the oil sprays gave about the same control as the straight leads.

The principal factors which governed the success of the spray schedules was the care exercised in timing the applications of the sprays and the maintenance of strict orchard sanitation, coupled with the use of chemical bands. With the exception of the Pear trees in the **Shepparton** district, which were banded with hessian bands, all the plot trees had chemical bands placed on them.

Value of Lure Pots.

The timing of the spray applications was done by means of lure pots containing 10 per cent. of malt vinegar solution.

These catches were supported by observations of the emergences of codlin moths from pupae in cages, eggs on young fruit, and entrances made by young larvae.

The lures also served as an estimate of the population of moths on the demonstration plots in the various districts, and also their distribution on any single orchard. They were placed in position before mid-October and counts of moths caught were made weekly, and the results graphed. To prevent fermentation of the lure materials, a small crystal of copper-sulphate was placed in each pot. The number of pots used on the plots was one to every 12 trees, but in a commercial orchard 24 pots would give a sufficient indication of the flight of the moths. On all the demonstration plots 545 pots caught 10,100 moths.

During February and March, when the young fruit is developing an aroma, the vinegar is not so attractive to the codlin moth. Better results are obtained with 10 per cent. molasses solution or Apple juice made from crushed cull fruit.

Spray applications were timed about 10-14 days after a substantial emergence of moths in the Spring, and in the Autumn a shorter period of about 6-8 days should elapse before applying the spray.

The success of the lure pots in the southern and northern districts was as follows:—In the southern districts 320 pots caught 6,444 moths, an average of 20.1 moths per pot for the season. In the northern districts 225 pots caught 4,026 moth, an average of 17.9 moths per pot for the season. The highest single catch in one pot for one week was 61, and the orchard with the highest average was at Croydon, where 26 pots caught 1,247 moths, an average of 48 per pot for the season. On this orchard during the week ending December 5, 1936, the 26 pots caught 408 moths, which constituted the peak.

Chemical Bands.

On the demonstration plots, 6,500 bands caught 50,000 larvae, an average of approximately eight per band. These bands destroyed 98 per cent. of the larvae entering them. They were placed in position before the second week in December. The cost of these bands, including materials, application and removal, was 1½d. per tree, i.e., about half the cost of one application of a lead arsenate spray.

With the assistance of growers on whose properties the demonstration plots were established last year, the work is being continued for another season.

This has been possible because these growers have consented to supply the materials and work in co-operation with Departmental officers. The same extension services that were carried out last year will be again in operation this season, and lure graphs indicating the flight of moths in the various districts will be placed in prominent positions, for example, post offices, schools, stores, cool stores, etc., where growers frequently gather, so that the position can be constantly under observation. Growers are also reminded that Supervisors have now had telephones installed and are keen to co-operate with growers who desire information on horticultural problems, particularly the timing of spray applications.

At the conclusion of the address, a vote of thanks was conveyed to Mr. Provan. In suitably responding, Mr. Provan stated that copies of the August and September numbers of the Journal of Agriculture, which contained details of the demonstration plots and the results, were available, and instructional circulars on black spot and codlin moth control were being prepared for distribution to growers. These circulars were available free on application to the Superintendent of Horticulture, Department of Agriculture, Treasury Gardens, Melbourne, C.2.

Jamaica: Exports of Grapefruit, Bananas and Sugar had increased up to May, 1937, over 1936, but coffee shipments had materially decreased. Five months' Banana shipments totalled 9,572,775 stems, just double those of the same period in 1936.

Black Spot of Apples

Spray Programmes Recommended.

IN DISCUSSING serious diseases of Apples in New South Wales, the Agricultural Gazette states that black spot, caused by the fungous Venturia inaequalis, is the most common and serious disease of Apples in that State. It affects both fruit and leaves.

How Losses are Caused.

Losses from black spot may result in the following ways:—

1. The fruits may fail to set owing to the blossoms being killed by the fungus.
2. Young fruits may be shed.
3. Fruits may become distorted, badly scabbed, or cracked.
4. The quality and keeping properties may be reduced.
5. Fruits which show no signs of the disease when harvested may develop spots in storage as a result of infection during the late stages of growth.

Spraying Very Effective.

Complete control of black spot has been obtained in numerous instances in seasons most favorable to the development of the disease. This has occurred in all of the Apple-growing districts of the State, where the following spray programmes have been carefully followed:—

For Wet Districts—

a. Bordeaux mixture (6-4-40) at "spur-burst," when 15 per cent of the spurs are at this stage.
b. Lime-sulphur (1-20) at "pink," when 15 per cent. of the blossoms are at this stage.
c. Lime-sulphur (1-50) at the "calyx" stage, when the petals are falling, combined with arsenate of lead for codlin moth. Use calcium caseinate as a spreader.
d. Lime-sulphur as in c, combined with the first, second and third "cover" sprays, if necessary.

For Drier Districts—

a. Bordeaux mixture (6-4-40) at "spur-burst," when 15 per cent. of the spurs are at this stage.
b. Lime-sulphur (1-28) at "pink," when 15 per cent. of the blossoms are at this stage.
c. Lime-sulphur (1-75) at the "calyx" stage, when the petals are falling, combined with arsenate of lead for codlin moth. Use calcium-caseinate as a spreader.
d. Lime-sulphur as in c, combined with the first, second and third "cover" sprays, if necessary.

For Murrumbidgee Irrigation Area (Tentative programme)—

a. Lime-sulphur (1 in 10) at "green-tip" stage.
b. Lime-sulphur (1 in 35) at "pink" stage.
c. Lime-sulphur (1 in 75) at "calyx" stage, together with arsenate of lead for codlin moth and calcium caseinate as a spreader.
d. As in c, with the "cover" sprays for codlin moth, if necessary.

Important Points.

It is important that the trees be effectively sprayed, the tips and centres receiving the same attention as the outside portions. The sprays should be applied immediately after preparation. A pressure of not less than 250 lb. is desirable.

Two officers of the U.S.A. Department of Agriculture, Dr. L. A. Hawkins and Mr. G. G. Becker, recently visited South Africa to negotiate for S.A. fruit on the American market.

"SPREGAN"

Colloidal Liquid Sulphur

For efficacious treatment of BLACK SPOT, BROWN ROT, DOWNY MILDEW, OIDIUM, and all Fungus Diseases for which Sulphur in any form may be used as a control.

SAFE - - - - Because it prevents Leaf Scorch.
CERTAIN - - Because it gives definite control of Fungus Diseases.
ECONOMICAL Because it ensures maximum results at less cost than other forms of Sulphurs.

As a Precautionary Spray, 1 lb. of "SPREGAN" to 100 gallons of water.
As a Combatant Spray, 2 lb. of "SPREGAN" to 100 gallons of water.

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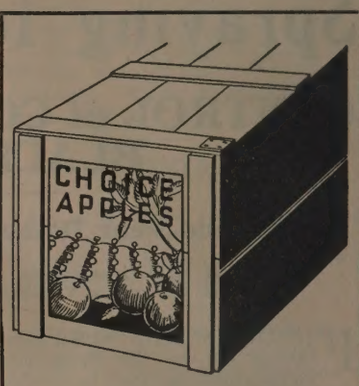

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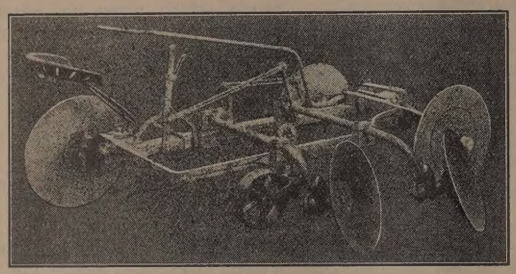

Double Furrow

A sturdy, strong plow equipped with reversible discs to enable the operator to plow up to, or away from the trees. Operated by a single lever and with nothing to catch branches of trees. To facilitate the movement of the plow around the orchard the discs are movable and lift clear of the ground.

The steering arms are drop forged from the best mild steel and the main wheels are equipped with ball bearings.
Two medium horses can work this machine all day without tiring. A machine may be obtained for a trial at any time.

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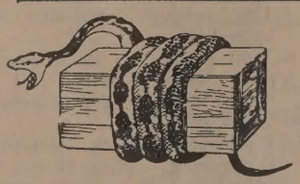

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The Python Junior
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Top lever action, uniform tension, speedy and easy to operate with an offcut of $2\frac{3}{4}$ inches.

PYTHON has all the essentials for a perfect pack.

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Python Wire Strapping Pty. Ltd.

93 HOWARD STREET, NORTH MELBOURNE.
Phone: F 2708.

42-44 MEAGHER ST., CHIPPENDALE, SYDNEY
Phone: MA 4392.

South Australian Agents:
JACKSON & SPRING LTD.
23 HYDE STREET, ADELAIDE
Queensland Agents:
JACKSON & SPRING LTD.
495 ADELAIDE STREET, BRISBANE

INCREASED PEAR DEMAND.

Follows Conditioning.

The process of ripening Pears before offering them for sale on the wholesale markets have proved beneficial in sales movements, declares Roy Webster, of the Oregon-Washington Pear Bureau, in the "Packer."

INCREASED consumption and the opening of new domestic markets for Pears have been proved possible by the experience of the Oregon-Washington Pear Bureau. The trial was undertaken to meet increased production of Winter Pears on the Pacific Coast. At first some objection was raised by retailers to the conditioning programme because they had become used to selling the Pears green and the yellow appearance was expected to lessen sales and a doubt of the keeping quality of conditioned Pears was expressed.

Retailers discovered, however, that increased sales resulted and any small loss from spoilage was thus met. Bosc Pears had been first experimented with, and returned satisfactory reports. Anjou Pears, though a light crop last year, were found equally popular when conditioned, and prices were increased owing to an improved demand on the New York market.

The preliminary work done by the Oregon-Washington Pear Bureau has been watched by Californian shippers who experimented further with shipments going east to Boston. Their first reports were satisfactory, and now an advertising campaign will be undertaken to make Americans "Pear-conscious," even in Winter. The ripening will be done in the receiving markets where the Pears will be held at a temperature of 70 degrees for from two to seven days before being shipped away or put into local retail channels.

WAR-TORN SPAIN.

Sends Fruit to His Britannic Majesty to Mark the Coronation.

In spite of civil war in Spain, with its attendant demoralisation of production, commerce and politics, fruit-growers in the Valencia district arranged and forwarded a present of fruit to His Majesty upon the occasion of his recent Coronation.

With it went an appreciation of friendly national and commercial relations that have existed between the two countries for a long period, and the hope that such would be continued in the future.

The piquancy of the Spaniard is seen in the address accompanying the present, which included the following sentence:—"In spite of the many fallacious imputations thrown upon us, we, facing the ones that rise themselves as defenders of the high social heirarchies—though they do not respect Kings nor Popes if convenience advises them so—we have the gentility of offering an artistic present of flowers and fruits from our orchards to the Sovereign who symbolises the Nation that has saved thousands of Basque children and that at any moment was found, where it was necessary, bringing the balsam of her consolation and the heroical safeguard of Liberty."

A system of frost prevention for citrus trees has been patented by Col. Chas. Rutherford in Arizona. It consists of a chemical spraying apparatus.

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That strikes are expensive to any country is proved in the report by the Governor of Hawaii that the recent shipping strike on the Pacific Coast of U.S.A. had cost Island trade at least £1,200,000.

SPRAY INJURY

To Be Investigated. — Apple and Pear Tests.

FOLLOWING the result obtained from codlin moth and black spot control measures taken on orchards throughout the State during 1936-37, spray injury is now to be investigated by the Horticultural Section of the Victorian Department of Agriculture during the coming season.

Factors in Injury.

Variety in climatic conditions was a characteristic of this season, and it is believed that this influenced the injury by spray that was detected during the tests—chiefly due to lime sulphur and lead arsenate.

It is desirable that the materials used for the control of insect pests and fungus growths shall be non-injurious to trees. Departmental experts state that materials which combine these qualities are rare, and that although the spray materials used in Victoria have been standardised, injury occurs under certain conditions. Generally high temperatures increase the danger, particularly where lime sulphur is used, although severe lime sulphur injury has been observed also under moderate or even low temperatures. Humidity has an important influence on the rate of drying, and under conditions of high humidity injury is likely to occur even at the lower temperatures. The health of the tree and the condition of the foliage, together with the concentration of the spray and the rate at which it is applied, also are factors contributing to the likelihood of injury.

Growth and Burn.

Records relating to the Apple and Pear tests show that lime sulphur was responsible for mild spray injury on plots at Stanley, Harcourt, Strathfieldsaye, Panton Hill, Bacchus Marsh, Pakenham and Drouin. The injury which followed the application of 3:80 lime sulphur at 5 to 10 per cent. blossom stage (except at Panton Hill and Pakenham) took the form of marginal burn on the leaves, and tree growth was checked for a period of seven to fourteen days. Leaves became distorted, and the foliage of the trees was throughout the season distinctly in contrast to the dark healthy green foliage of trees sprayed with Bordeaux mixture. Certain varieties, particularly Granny Smith, were more susceptible to injury, and the trees making normal, healthy growth were less susceptible, and recovered in a shorter time than those that were less vigorous. Lime sulphur was associated with fruit russet at Pakenham, but on no plot was it necessary to reject any quantity of fruit at harvest time on account of blemishes caused by lime sulphur injury. Owing to the increase in polysulphide content from 15 to 20 per cent. in lime-sulphur sprays last season growers who experienced trouble are advised to reduce the strength of the spray.

Thorough Mixing Essential.

Risk of injury can be minimised also by avoiding, where practicable, mixing lime sulphur with lead arsenate sprays. Where they are combined mixing should be thorough, the lead arsenate being mixed with water until of the consistency of thin cream, and added to the diluted lime sulphur and spreader in the vat immediately before spraying. On no account should lime sulphur be applied within three weeks of a white oil spray.

Owing to the susceptibility to russet of Jonathan, Yates, London Pippin and Dunn's Apples, the use of a programme of Bordeaux mixture sprays for black spot is not recommended for these varieties. Bordeaux mixture (6:4:40) sprays can usually be applied safely to these varieties at the green-tip stage, but the risk of injury when applied later is very definite. On the plots at Pakenham Upper and Bacchus Marsh use of Bordeaux mixture (6:4:40) at the green-tip stage on Jonathans caused russet, which in some cases resulted in fruit splitting badly.

Owing to the use of the acid form of lead arsenate, spray injury due to soluble arsenic is not uncommon. On most plots very slight arsenical injury was apparent on the foliage, but at Panton Hill and Wantirna injury in the form of brown spot on the leaf, usually marginal or near the tip, was more serious, and was partly responsible for premature defoliation. At Harcourt there were purplish semi-circular areas on the fruit of Jonathan trees. This occurred in December, after applying white oil in the presence of a heavy residue of lead arsenate.

In 1936 California canned 380,000 tons of Tomatoes.

Fruit Fly and Loquats

New South Wales Regulations

An announcement appears in the N.S.W. Agricultural Journal that all fruit infected by Fruit Fly must be immediately removed from trees and all fallen fruit collected at intervals not exceeding three days and destroyed.

REPORTS from many coastal districts indicate that the Loquat crop this season will be a heavy one, and that maturity of the fruit will occur at widely varying intervals. Ripe fruit has been observed on some trees right through the late Autumn and Winter months, and in many cases Fruit Fly infestation has been observed. The flies emerging from this infested fruit, together with those which have over-Wintered as adults, may cause a heavy infestation of the Loquats in the Spring when the major portion of the crop ripens, and thus constitute a menace to the Summer fruits later in the season. Any neglected unwanted and noncommercial trees should be cut out or the fruit removed before it is attacked.

In the interest of all, therefore, Loquats should be carefully watched for any signs of attack by Fruit Flies and the prescribed measures for their control rigorously carried out. Particularly, should all infested fruit on the trees and on the ground be removed at intervals not exceeding three days, and destroyed forthwith by burning thoroughly, boiling for ten minutes or by placing in an approved insect-proof pit. In addition, all Loquats must be removed from the trees not later than October 31. By doing this, a break in the succession of ripening fruits is provided, and the fly is prevented from breeding up to large numbers before the early Summer fruits are susceptible to attack.

The Lure.

The importance, therefore, of paying close attention to Loquats in the application of measures against Fruit Fly is readily apparent. Traps or foliage poison spray must also be used on Loquats, commencing at least five weeks prior to the ripening of the fruit and continuing for four weeks after the harvest is completed. The traps (at least one to every eight trees) are baited with 6 fl. oz. of mixture composed of:—

Essence of vanilla, ½ fl. oz. (about a teaspoonful).

Household ammonia, ½ fl. oz. (about a tablespoonful).

Water, 26 fl. oz. (about 3 breakfast cups).

The mixture in the traps should be renewed at weekly intervals, and the traps cleaned out.

The Foliage Spray.

The foliage poison spray consists of:—

Lead arsenate powder, 4 oz.

Molasses or treacle, 4 lb.

Water, 3 gallons.

Fruit syrup, 1 gallon.

The fruit syrup is made by boiling 5 lb. fruit in water.

The spray is applied at weekly intervals, or sooner if rain occurs, to small patches of foliage (avoiding the fruit as far as possible) and using about 6 fl. oz. per tree.

Prescribed measures for the control of Fruit Fly are compulsory and the following, relating to the removal of various citrus fruits by certain times, should also be borne in mind.

(1) **Seville Oranges.**—Remove from the trees all Seville Oranges of the intermediate crop not later than July 1 and of the main crop not later than October 31.

(2) **Mandarins.**—Remove from the trees all main crop Mandarins not later than October 31.

RUSSIAN APRICOT CROSSES.

More Suitable Varieties Sought.

The latest report of the Lenin Academy of Agricultural Sciences states that in the U.S.S.R., many problems are being faced by growers anxious to effect improvement in Apricot production and quality, and the creation of marketable varieties suitable for both cannery and drying. It is suggested that this might be effected by selection and propagation of intervarietal crosses within the limits of the common Apricot, Armeniaca vulgaris.

Increased hardiness, immunity from disease, and later blossoming, are characters to be desired. Experience already gained in distant hybridization at the Crimean, Central Asiatic and Maikop stations of the Institute of Plant Industry show that the Apricot gives a greater or smaller percentage of normal progeny when crossed with Japanese Plums (immune), or Hansen's Hybrid Plums (late blossoming and hardy). They also found that crosses were more successful if the Apricot was used as the pollen parent, not as the mother plant.

THE CLEANER THE FRUIT
THE BETTER THE PRICE

A proper spray programme is recognised today as an economic necessity. When free from insects and fungus, trees give bigger crops of better, cleaner, more saleable fruit. Spraying is an investment, **not** an expense. And the finest investment is the use of the finest spray materials to a scientific programme. With Arsenate of Lead and Bordeaux, Gargoyle White Spraying Oil will mix perfectly, and besides doing a perfect killing job itself, will make both these sprays more efficient.

Gargoyle WHITE Spraying Oil

RELATION OF SIZE TO NEEDS.

A study in Apples.

A report appearing in the latest issue of the Imperial Bureau of Fruit Production bulletin gives a resumé of a study made by A. E. Murneek and G. C. Schowengerdt, of the American Horticultural Society, in the relation of size of Apples to the number of seeds and the weight of spur leaves.

The study was undertaken to determine to what extent there is a correlation between size of Apple fruits, number of seeds per fruit, and leaf area per spur. Several hundred bearing spurs were collected at random from the inside (shaded) and outside (not shaded) portions of a large Wealthy tree maturing a heavy crop. The spurs were separated into those with small and large fruits, and determinations were made of seed numbers, fruit weights and leaf weights, which are fairly closely correlated with leaf areas if estimated with little loss of moisture. Good correlations were obtained between weight of fruit and number of seeds and between weight of fruit and weight of spur leaves, but Apples from the shaded parts of the tree showed a significantly higher correlation between fruit weight and seed number than those from outside non-shaded parts, although in both cases the smaller fruit gave a higher fruit weight-seed number correlation than did the larger fruit. As was expected, there was no correlation between leaf weight and seed number. A tentative conclusion is drawn that with shaded trees and branches, a relatively high number of seeds will result in larger Apples, whereas with non-shaded trees or branches comparatively larger fruits may be formed in the presence of fewer seeds due to greater average leaf area per spur per branch, and a high photosynthetic efficiency of the leaves.

During the recent shipping strike in San Francisco, 4,000 cases of citrus fruits were taken to Honolulu on board U.S. Army Transports to relieve the famine in such fruits in the Hawaiian Islands.

MANY USES FOR LIME.

Sprays and Soil Improvement.

Lime in its several forms is so extensively used in agriculture as to be almost indispensable to the practical farmer desirous of following his calling along profitable lines.

Firstly, lime is essential for the preparation of many sprays and dust employed by orchardists in combating insect and plant pests. As a soil improver lime acts mechanically in that it lessens the cohesiveness of clay soils and increases that of sandy soils. It also acts chemically in neutralising free humic and similar acids present in some soils and injurious to plant life. Lime is instrumental in promoting the growth of nitrifying organisms, by which nitrogenous material in the soil is converted to nitrate, and acts beneficially in hindering the growth of many fungoid diseases.

Varieties of Limestone.

The terms limestone refers to any rock in which the principal constituent is carbonate of lime. It may be formed either chemically by precipitation from solution or organically by the accumulation of animal and plant remains. Where considerable amounts of magnesium carbonate replace the calcium carbonate, the rock is known as dolomite.

The term marble refers strictly to a metamorphised limestone, but commercially it is applied to any limestone of sufficient hardness to take a polish.

Lime may be applied to soils in the following forms:—

(1) Carbonate of lime (calcium carbonate).
(2) Quicklime or burnt lime (calcium oxide).
(3) Slaked lime (calcium hydrate), or
(4) as mixtures of the above.

Owing to laborers refusing farm work at 8/4 per day when they were getting 12/6 per day on sustenance work, orchardists in Long Island (U.S.A.) brought in 'bus loads of negroes from the south to meet labor requirements.

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THE STANDARDISED COPPER FUNGICIDE.

Takes the place of home-made mixtures and saves valuable time. Simply mix with cold water. Dilution: 1 lb. to 10 gallons. For the control of Black Spot, Curl Leaf, Shot Hole, Downy Mildew, etc.

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The latest and most efficient control for all types of Mildews, Moulds and Rots, particularly Powdery Mildew, Brown Rot, Oidium, etc.
May be used in combination with Bordinette or Lime Sulphur.
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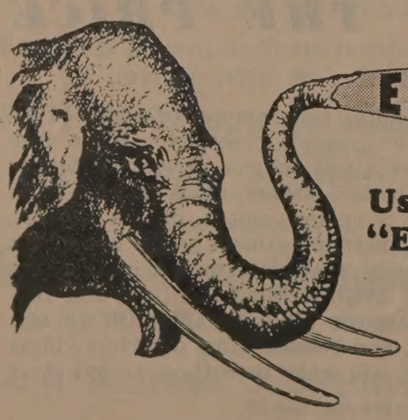

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FRUIT GROWERS generally have come to depend on "Elephant" Brand Sprays. They find them absolutely reliable, efficient and of guaranteed quality.

We can supply all your Spray Requirements—ARSENATE OF LEAD (Paste or Powder), SPRAY SPREADER, SPECIAL COPPER MIXTURE, LIME SULPHUR, WHITE OIL, NICOTINE SULPHATE, RED OIL, Etc.

Extract from "BETTER FRUIT," March, 1937, by Dr. R. L. Webster, Entomologist, State College of Washington, Pullman: CODLIN MOTH COVER SPRAYS—"Ever since the imposition of an arsenic tolerance in 1926, and even before that time, investigators have been testing other materials which may be used in place of lead arsenate. Following all these intensive and extensive investigations lead arsenate appears to have certain inherent qualities which place this material foremost as an insecticide for codlin moth control."

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VICTORIAN NEWS AND NOTES

Victorian Fruit Marketing Association

THE MONTHLY MEETING of the Executive of the V.F.M.A. was held at Melbourne on September 24, Mr. A. S. Harrison presiding. There were also present Messrs. W. H. Carne, W. P. Hutchinson, J. J. Tully, G. H. Sprague, E. Russell, F. Moore, R. A. W. Bailey, A. Perry, G. Douglas, H. M. McLean, C. H. Jost, S. Brown, and the Secretary, R. E. Boardman. Apologies were received from Messrs. G. W. Brown (President), J. G. B. McDonald, M.L.A., K. Eagle, F. Cave, J. M. Ward and J. W. Barker. It was decided to send a letter of sympathy to Mr. Brown in his illness.

Cool Storage Enquiry.

Letter received from the Minister for Agriculture, Mr. Hogan, agreeing to the Association's request: (1) That the insurance money (£90,000) on the burnt portion of the Victoria Dock Cool Store, would be kept in trust; and (2) the appointment of a committee of producers to consider problems in connection with cool storage and to make recommendations to the Government.

In the discussion, the view was expressed by some members, that the whole question should be reopened and the request made for the rebuilding of the Victoria Dock Cool Stores, as these stores were always a safeguard against increase of prices for storage charges. There was also the possibility of the insurance money being lost sight of, when compiling State Financial Budgets.

Mr. Russell gave details of the information compiled for the Investigation Committee, showing a peak shortage last year of 450,000 cubic feet cool storage space, which shortage had since been made up by privately-owned stores. New facilities included full provision for Pear and Apple packing, also insulated vans to convey cool-stored fruit to ship's side. The Minister had now agreed that the £90,000 insurance money be held in trust for rebuilding the Victoria Dock Cool Stores if deemed advisable, and also to the setting up of a representative Committee, with power to discuss storage rates.

At the instance of Mr. Perry, it was decided to empower individual cool stores or associations to write Mr. J. G. B. McDonald, M.L.A., setting out full details in order to strengthen his hands for any subsequent approach to the Minister.

It was also decided to write acknowledging the Minister's letter and again requesting the appointment on the Committee of a representative of the Orchardists and Fruit Cool Stores' Association.

Sale of Fruit by Count.

Letter received from Australian Women's National League agreeing to the Association's proposition that large fruit should be sold by count not by weight. Mr. Moore reported having attended meeting of Council of Housewives' Association and their reaction seemed generally favorable, the decision would be conveyed by letter.

Vermont Field Day.

Mr. Moore reported successful Field Day at the orchard of Mr. F. G. Beet, Vermont. It was decided to send letter of appreciation to Mr. Beet.

Mr. R. Bailey congratulated Mr. Moore on his address describing the activities of the Apple Publicity Committee.

Federal Grant.

The Secretary reported the activities of the Executive of the Apple and Pear Council in seeking a grant in lieu of freight reduction on 1937 exports of Apples and Pears. The decision of the Government was that the grant would be 2½d. per case on Apples and Pears exported in 1937, plus £5,000 for local Apple and Pear publicity and balance for horticultural research—total £65,000.

Mr. S. Brown contended that a per case basis for grant was not equitable and that Pears should not rank equally with Apples.

Mr. Moore detailed the activities re Federal grants over the years, and the unvarying line of policy that the grant was in lieu of freight reduction, and the difficulties and delay in distribution of grant in any other way than on a per case basis.

Reports received.

Railway Trucks.

Letter received from Railways Department stating that a programme had been arranged for the strengthening of the floors in "U" trucks during the current financial year. Further that louvre trucks would not again be used for the carriage of show stock and thus the receipt of trucks containing animal droppings should not again be experienced. Noted with appreciation.

Fruit for India.

Letter received from the Apple and Pear Export Council conveying communication from Macdonald, Hamilton & Co. to the effect that arrangements had been made to increase refrigerated space in B.I. S.N. steamers engaged in the direct service.

Letter received from Apple and Pear Council conveying statement from Department of Commerce, showing increase from 23,670 cases Apples exported to India and Ceylon in 1936 to 41,416 cases from January to June, 1937.

Annual Meeting.

Annual report and financial statement were submitted and accepted, subject to ratification for presentation at annual meeting at the Board Room, Commercial Travellers' Association, Melbourne, on Friday, October 8, at 2.30 p.m. The Executive to meet the same morning at 10 o'clock.

Apple and Pear Council.

Grower delegates elected to the Apple and Pear Council annual conference were Messrs. G. W. Brown, F. Moore and R. Bailey. Mr. Brown to be the representative on the Council's Executive with Mr. Moore as alternative representative.

Vermont Field Day

AN orchardist's Field Day was held on September 16, under the auspices of the Victorian Fruit Marketing Association, the Southern Pear Packing Company Ltd., and the Southern Fruitgrowers' Association, Mr. F. G. Beet, of Railway-road, Vermont, kindly made his orchard available for the day.

There were about 150 people present in the morning, but this number was considerably increased during the afternoon. Everybody showed keen interest in the proceedings, which included talks, a demonstration on refurnishing fruit trees and demonstrations of orchard implements. There were also on view, fruit-wiping machinery, spray materials, spraying outfits, fruit by-products, motor chassis and ploughs. The fruit-wiping machines displayed were the Horton, Harvey, and Perfection. Spray materials included Neptune, Vallo, Buzacott, Blyth's and Elephant Brand Sprays. The by-products displayed were Cave's Pure Fruit Drinks and Mac's Cider. English Bedford and Diamond T. motor chassis, Fordson and Howard tractors, as well as Buzacott and Bave "U" spray outfits were also displayed.

Mr. W. A. Thiele, President of the Southern Fruitgrowers' Association, in welcoming those present, regretted that the Government had not so far agreed to the reasonable request that the sale of large fruit by count instead of by weight should be made compulsory: he considered also that the Government had not dealt adequately by the industry in the matter of scientific research.

Working demonstrations of Fordson tractors, Howard Rotary Hoes and the Buzacott Spray outfit were then given.

Following these demonstrations, Mr. J. L. Provan, B.Ag.Sc., Horticultural Research Officer, gave an address entitled "Results of Codlin Moth and Black Spot Demonstration Plots." He emphasised the value of lure pots to ascertain peak flights of codlin moths and thus to determine the best time for spraying.

Mr. Frank Moore, a member of the Co-ordinating Committee of the Australian Apple and Pear Council, said that while it was difficult to immediately estimate the results of the expenditure of between £8,000 and £9,000 in the publicity campaign, a vast amount of good work had been done in creating a "fruit conscience." There was an urgent need for the compiling of statistics, particularly of the amount of fruit sold in the Melbourne markets. Large quantities of Apples were still held in Tasmania and Victoria, which needed to be sold before the end of November. The task before Apple growers was to change the dietary habits of the people. The trouble was not over-production, but under consumption.

Mr. F. M. Read, M.Ag.Sc., Chief Inspector of Horticulture, spoke on the subject "Improving Soil Fertility." In this connection a long-range policy was needed, as soil fertility was a complex subject and not merely a matter of adding artificial fertilisers. The ploughing in of humus was a most important matter. Adequate drainage was imperative.

Mr. J. Hummerton stated that the manufacture of by-products, such as pure fruit drinks, Apple vinegar, etc., used a good deal of the second-grade fruit, which would otherwise glut the market and bring down the price of the better quality fruit.

The demonstration of the refurnishing of fruit trees was appreciated.

A hearty vote of thanks was conveyed to Mr. Beet.

25,518 Florida farmers, operating on 2,820,570 acres of orchard land, are co-operating in soil conservation.

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The Agricultural Adjustment Administration is contracting for aeroplane mapping of 23,000 square miles of Florida orchard land, representing 85 per cent. of all holdings participating in soil conservation.

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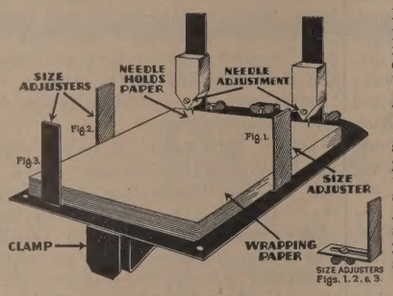

Has now been improved by:—

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Adjusters have been extended to allow the insertion of a full ream of paper at the one operation.

Double-Needle Control ensures that there is no waste or unsightly torn corners.

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or Interstate and District Agencies.

The Federal Reversible Disc Plow is adaptable to all conditions of soil cultivation. It has an even bottom, leaves no ridging, turns the sod well over.

It has the following new features :—

1. Free from side draft.
2. Improved means for adjusting breast and undercut.
3. Each disc carried on independent supports.
4. Disc bearings interchangeable.
5. Dual wheels can be fitted for hard and specially hilly conditions.
6. Works with a loose neck yoke—no more sore shoulders.
7. All adjustments are simply and easily arranged.
8. Patented 3-horse abreast yoke available if required.
9. All bearings are of oil bath type.
10. Turns sod equally well on flats and hillsides.
11. Convertible to take orchard attachments of various kinds.

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Agricultural Implement Manufacturers. Established 1853.

POTSWOOD, VIC. BURWOOD, N.S.W.

Young Orchardists

Report from Harcourt Club.

TWO orchards are to be used as demonstration blocks by the Victorian Department of Agriculture, under the supervision of the local orchard inspector.

The Club, in conjunction with the "Castlemaine Mail," publishes Black Spot programmes from week to week.

An offer has been received by an orchardist to place his entire block at the club's disposal to conduct manurial experiments under the guidance of the Department. The orchardist is supplying the manure at his own expense.

A great deal of thought and discussion is being given by members at meetings on the ever-increasing problem of marketing.

Growers generally are paying more attention to their Black Spot sprays.

The low state of our water supplies are still causing great anxiety. Quite a number of orchardists are without water for spraying and stock.

Plums have bloomed profusely, and Pears and Cherries are now blooming. The bloom is very healthy.

Ploughing is general; some growers are busy reworking over old varieties, the bark graft being used in most cases.

Growers who have frost fighting equipment are taking the usual precautions against frost, oil burners being the popular burner.

TATURA RESEARCH STATION.

Experimental Breeding and Selection.

The Victorian Government made a grant last year for the establishment of a Horticultural Research Station at Tatura. The purpose of the station is mainly to investigate the problems of growers of canning fruits in the Goulburn Valley.

Thirty-five acres of Peaches and Pears are being planted now, but the Chief Inspector of Horticulture, Mr. F. M. Read, plans to ultimately include Apricots and Prunes when the service of the station will develop into an instructional centre for fruit growers in the Northern part of the State.

The total area available is 104 acres and many phases of soil survey, experimental fruit culture and other research work will be carried out under the supervision of the Department of Agriculture.

Co-operation by growers will be a feature of the work of the station, and already an advisory committee of growers has been formed. Since the plantings of the station will not mature for some years, experimental work on privately-owned orchards will be carried on and seedlings, propagated on the station nursery, will be released and planted on co-operating orchards for observation.

BACK TO THE FARM.

We moved from town and settled
Back on the farm to-day.
Folks said it was a pity
With us so old and grey.
But our tired hearts were hungry
For the wide reach of sod.
It seemed that when we left it
We'd got away from God.

When I was in the meadow,
Or seeding in the grain,
I met Him every morning
In sunshine, dew, and rain.
He nodded in the roses,
Smiled in the goldenrod
We came back to be near them
And live again with God.

(C. E. Flynn in "Pacific Rural Press")

BERRY DISEASES.

Department Will Attack.

Owing to lack of staff, the Victorian Department of Agriculture has not been able, up to date, to devote all the attention to berry fruit disease control that they would like, but with the recent appointment of another officer to the plant research laboratory, opportunity will be taken to investigate these problems.

Heavy losses in berry growing districts have been sustained, particularly amongst Strawberries. Nearly 75 per cent. of the crop of Melbas were destroyed on one large plantation by Crinkle or yellow edge, a virus disease. This is reported to have been responsible for the decrease of pickers from 180 men last year to only 40 this year.

The attack will not be restricted to Strawberry pests, however, but will attempt to study and control all berry fruits diseases.

CORRECT IRRIGATION.

Proper Control of Water.

TOO MUCH WATER on agricultural and orchard land is as dangerous as too little water, explained Mr. A. V. Lyon when addressing a conference of growers recently. He was speaking on "Maintaining the Productivity of Irrigated Lands," and pointed out the causes of wastage and the steps necessary to prevent it.

In examining a wide range of irrigated lands during the past five years, he said, he discovered that the application of too much irrigation water was one reason why some settlements had deteriorated in growing value. A close study of the practice of irrigation is necessary to understand the minimum amount of water required by the various soils.

It was pleasing to note, he said, that corrective measures for preservation of fertility and for reclamation of wasted lands were at last receiving closer attention. These measures included improved irrigation methods, a better design for irrigation periodicy and, above all, agricultural drainage.

He explained that the method of agricultural drainage varied with the conditions, gravitational outfall through deep seated pipes being possible in settlements of high elevation such as Mildura, while in the low-lying settlements such as Renmark and the lower Murray lands, it was necessary to provide a life for the drainage waters.

In settlements where the low value of the land, or the nature of the soil, rendered agricultural drainage impracticable, amelioration measures consisted of proper control in the application of water, and surface drainage for removal of excess storm and irrigation waters. Any successful irrigation settlement must also develop a system of agriculture, including establishment of plants which grew successfully. This particularly applied to the irrigation of natural Australian grasses. This usually brought disaster in time, however, as there was insufficient cover to use the water artificially put into the soil.

With the awakening of an irrigation conscience, Mr. Lyon said, it should be possible to plan the irrigation settlements so that the land, our national heritage, could be preserved. Past history had shown that in many cases this had not been done, and the wasted land represented the degree to which we had failed.

Fruit at the Melbourne Royal Show

GOOD DISPLAYS SEEN IN ALL DEPARTMENTS

MAIN AWARDS

ALTHOUGH the 1937 "Royal" suffered in attendances owing to the outbreak of infantile paralysis in Melbourne, it gained by introducing night events on five of the nine days of the show. But the exhibits were well up to normal high standard, and the fruit industry was again well represented.

A tour of inspection that a visitor would be sure to take would have included those sections of particular interest to fruitgrowers. For the benefit of those readers who were unable to attend the show, we briefly describe some of the exhibits and give the main awards.

Agricultural Hall.

This was an educational treat for the orchardist and agriculturalist, probably more so for the latter, but many displays had to deal with fruit interests. In the Biological section were seen demonstrations of reworking fruit trees, showing the various grafts used in the State. A moth lure pot and a graph explained the use of the lure. Control of insect pests and plant diseases was well illustrated and all forms of spraying, dusting, fumigating were shown.

Several varieties of Beans that are now resistant to Halo Blight were shown and included seed of Black Prince, Pale Dun, Burnley Selection, Red Star and Superlative.

A significant statement appeared upon one stand "£3,000,000 per annum is lost through plant diseases and insect pests"—much of which could be saved.

Cases of Apples showing the correct method of grading and packing must have been both interesting and instructive as should have been a model of a Tomato packing bench. A showcase of various samples of Almonds and Walnuts was also seen.

Dried Fruits: An excellent display by the Dried Fruits Control Board and the Railways Refreshment Services attracted the interest of many. The usual sales stand in the Hall of Commerce also contributed a publicity avenue for dried fruits.

On the main stand were well-displayed trays of Raisins, Currants, Prunes, Apricots, Pears and Peaches. We noticed that almost everybody who passed were constrained to stop and view this exhibit.

Bottled Fruit: As usual, this really beautiful display caught all eyes. The arrangements of lighting and glass containers was distinctly inviting. Fruit and vegetables, beautifully packed and arranged, made a most attractive display. The lady attendants were in demand all the time.

Canned Fruits: A somewhat small display from the Goulburn Valley included samples of canned fruits from Shepparton, Ardmona and Kyabram canneries. We would like to have seen a better showing of canned fruits.

In this Hall also was an agrostological display that appealed to farmers, showing as it did the various grasses and field plants, and illustrating how certain treatments benefit them. Methods of irrigation were described elsewhere. Seed certification, strain investigation, noxious and other weeds, Potato and Onion varieties, methods of correct seed Potato storage, Maize products, Tobacco samples and seedlings, a good Flax display with a young lady working an old-fashioned spinning wheel, beet sugar display from Maffra and many other illustrative items of interest to the man on the land as well as to his city cousin, whose only first-hand knowledge of how his many primary requirements are met is from his annual visit to the Royal Show.

Attendants at all sections from the Department of Agriculture were very helpful to enquirers and gave much valued information, at the same time making contacts with the farmer and the public not ordinarily possible.

The Centenary Hall.

Although this Hall is at the far end of the Showgrounds, alongside the pigs, cattle and poultry pavilions, it never fails to draw large crowds, and is generally well worth the trip down past the arena. The district displays are the most spectacular, and impress the versatility of some of Victoria's agricultural districts.

This year Whittlesea won pride of place with Sale and Warrnambool filling second and third respectively. All were splendidly arranged, and the exhibits included fruit in all forms—fresh, bottled, jams and dried. Vegetables were prominent, honey and fruit juices were seen, and a host of other subsidiaries of the districts.

Apples: In the fruit sections there was a particularly good display, and, to quote only the main competitions, we noted the following:—

Orient Jubilee Cup: This is presented for 4 cases of Apples packed for export. Two cases from each entry had been sent to London and judged there, the other two cases were judged at the Royal. Quoting the London points and the Melbourne points respectively, with the totals, the awards were:—

1, W. H. Black, 89, 97—186 points.
2. G. G. Cole & Sons, 89, 95—184 points.
3, R. A. W. Bailey, 95, 88—183 points.

Packing class at Wantirna School (Vic.), packing Apples under "Bright Star" brand.

A fine collection of mixed varieties of Apples built in the form of a pyramid display was supplied by Messrs. Grant and Jenning, of Somerville, and carried Stewart's Seedlings, Democrat, Granny Smith, Delicious, London Pippin, Jonathan, Sturmer and Yates. It was the only entry and won the Governor General's Shield and the Fruit Growers' Cool Stores Association Perpetual Challenge Shield.

In the winning entries among the trays of Apples, R. A. W. Bailey showed even quality and choice Granny Smith. J. D. Grant was first for two trays culinary and two trays dessert, using Granny Smith and Delicious. G. G. Cole and Sons showed choice Granny Smith Apples in 2⅝ in. size. C. A. Bertuch was a consistent prize-winner. His trays of Rome Beauty and Dunn's Favorite were of high quality and rich color. Walter Hehn was also to the fore with his exhibits.

Pears: Everard Thiele staged prize-winning exhibits of Pears and obtained firsts for Winter Nelis, Glou Morceau, Josephine de Malines, and others. G. F. Thiele was an easy first with Winter Nelis in the award for a tray of dessert Pears (not otherwise provided for). Eric Thiele won with his tray of 12 Pears, Black Achan and variety Mme. Cole. C. A. Bertuch also won a number of awards.

Children's Packing: The Apple packing by children was particularly good, and ensures the future of the fruit industry in the hands of the rising generation. In the State Schools' Competition for school children taught by Department of Agriculture Instructors, Pakenham Upper was first, with Harcourt North second and East Burwood third. The packing was uniform and of high standard.

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"Buzacott"

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Pty. Ltd.
249 Franklin St. - Melbourne
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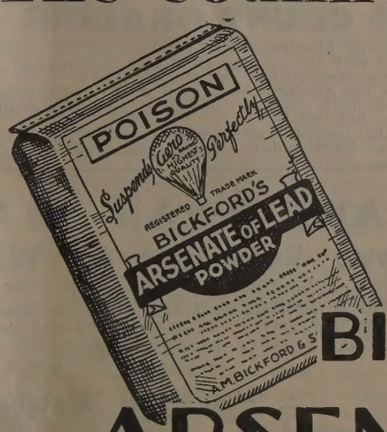


Orchardists, who for many years have sprayed with "Aero brand" Arsenate of Lead, still say that it is the most effective Arsenate of Lead they have ever used.

Its exceeding fineness and lightness in texture, its high covering and killing power, the ease with which it mixes and remains in suspension in the spray tank, place "Aero brand" in the front rank of all Arsenates of Lead. Although of such superior quality, it costs no more than inferior arsenates.

Interested growers may obtain full particulars from the Manufacturers or from any of the Interstate Agents listed below.

BICKFORD'S
"Aero" BRAND
ARSENATE OF LEAD

By every Test Bickford's "AERO" Brand is Best

INTERSTATE AGENTS:

VICTORIA—
Ramsay & Treganowan Ltd.,
469-477 Latrobe Street, Melbourne.

WESTERN AUSTRALIA—
Felton, Grimwade & Bickford Ltd.,
397 Murray Street, Perth.

NEW SOUTH WALES—
Buzacott & Co. Ltd.,
7-11 Market Street, Sydney.

QUEENSLAND—
Buzacott (Queensland) Ltd.,
443 Adelaide Street, Brisbane.

TASMANIA (Northern Districts)—
Gardner & McKenzie Pty. Ltd.,
64 Cameron Street, Launceston.

TASMANIA (Southern Districts)—
Port Huon Fruitgrowers' Co-op. Association Ltd.,
Davey Street, Hobart.

according to the judge, Mr. J. M. Ward.

In the competition for members of Young Farmers' Clubs for the Gerrard Shield, Packenham Upper (Jean Maplestone) gained first. Pakenham North (Laurie Fitzsimmons) second, and Pakenham East (Wallace Reid), third.

Dried Fruits: In this section the Irymple Packing Pty. Ltd. made practically a clean sweep, gaining first place in 56 lb. boxes of Currants, Sultana (light color), Sultana (brown type), Raisins and Waltham Cross Raisins. In 28 lb. boxes with dried Pears, Apricots, Peaches and Prunes.

Citrus: In the collection of packed citrus fruits, Wood, Son and Seary Ltd. (95 pts.), won first and Rupert Watson Shield, with Renmark Fruitgrowers' Co-operative Ltd. (92 pts.) second, and Irymple Packing Pty. Ltd. third with 91½ pts.

In the export pack, 5 weeks in cold storage to determine keeping quality, Wood, Son and Seary Ltd. gained the honors, followed by Irymple Packing Pty. Ltd. and Mildura Co-op. Fruit Society Ltd., in that order.

First places in other citrus displays went to:—Wash. Navels, D. B. Halhed; Late Valencia, R. D. Hollins; Med. Sweet, Irymple Packing Pty. Ltd.; Lemons (fresh), Curlwaa Co-op. Packing Society; (cured), L. A. P. Webb; Pomelo or Grapefruit, R. D. Hollins; Mandarins, Irymple Packing Pty. Ltd.

Mr. C. A. Bertuch was the most successful exhibitor in the Apple classes, winning 12 firsts and several seconds. The tray and dish classes were uniformly good in quality and grade.

The best case of Pears for export went to G. F. White, with 89 points.

CO-OPERATIVE SOCIETIES AFFILIATE.

Queensland, N.S.W. and S. Aust.

An important conference was held at Adelaide at the end of September, when an agreement was reached between the Committee of Direction of Fruit Marketing (Brisbane), the N.S.W. Banana Growers' Federation and the S. Aust. Fruit Growers' and Market Gardeners' Association, with regard to the marketing of the produce of these organisations.

It is hoped by united action to improve marketing conditions in the main Australian markets.

Export Sugar Rebate.

The Export Sugar Committee notifies that as from October 1, 1937, the rebate on sugar used in fruit products exported overseas will be:—

Exported to New Zealand.

Fruit Products ..	£5	0	0	per ton
Other Goods	£7	4	0	per ton

Exported to Other Destinations.

Fruit Products .	£17	16	0	per ton
Other Goods . ..	£20	0	0	per ton

BORON TREATMENT IN CANADA.

For Deficiency Disease.

Mr. Carne's Studies.

During his return to Australia, Mr. W. M. Carne, who spent some time in London inspecting Apple arrivals on behalf of the Commonwealth Department of Commerce, toured the main Apple-growing districts in Canada. He returned to Australia early in September, and stated that one of the outstanding features which impressed him while in Canada was the manifestation of boron trouble in the Apple orchards. In British Columbia this was due to a deficiency of boron in the soil, while in some of the Eastern States it was found in soils of high lime content, which resulted in the boron being unavailable to the trees.

In British Columbia the trouble was particularly severe in the shallow soils, which dried out rapidly, but was extending to the deeper and more fertile areas. Dr. McLarty had found that boron deficiency was the cause of the trouble at about the same time as it was being successfully diagnosed in New Zealand, the independent workers arriving at the same conclusion. It had been found that the trouble, which resulted in serious malformation of the Apples, with evidences of "internal cork," could be successfully treated by the application of about 30 lb. boric acid to the acre.

So successful had the treatment proved in British Columbia that it was now proposed to treat all orchard lands in this way (whether showing symptoms or not), as a precautionary measure, as it was becoming obvious that the disease would extend. Orchards which had become so badly affected that abandonment was the only course, as they were giving little or no commercial crops of fruit, had been restored to profitable production by a treatment costing only 2d. or 3d. a tree.

FIJIAN BANANAS.

Why Free from Bunchy Top?

Investigator Returns.

With the object of determining how, without any special attack in the form of control, Fiji Banana growers had practically recovered from a devastating attack of Bunchy Top disease some years ago, Mr. C. J. Magee, Plant Pathologist of the N.S.W. Department of Agriculture, recently visited Suva.

He returned to Sydney early in September and eulogised the assistance given him by the Suva officials in his investigations. He is now preparing his report, which will be shortly available. It is expected that it will contain much information valuable to Banana growers in Australia.

"HARVEY" FRUIT GRADERS
and Processing Equipment

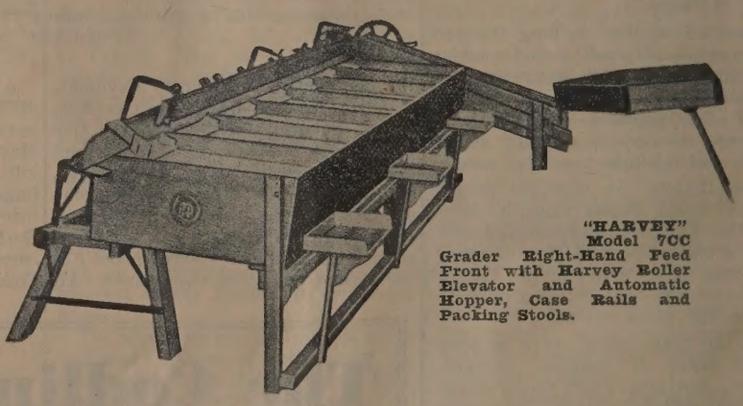
THE NEW HARVEY FRUIT GRADER with all the latest improvements which go to build up a more accurate pack, absolutely eliminates bruising in the process of grading and packing.

It gives correct lidding height for your pack, thus eliminating bruising which usually takes place at the ends of the case when lidding.

The Harvey new season's Grader has several novel features—
It is the most perfect fruit grader ever offered to the packer.
Decided improvements have been made over the old mode of grading.

The Grading element can be varied to a fraction to give the correct size and count. If a pack is too high in the case or too low, each element can be altered fractionally without interfering with your count. Thousands of cases of tomatoes being sold at the Melbourne Market to-day are graded with Harvey Graders.

The Grader is almost human inasmuch as it can be used to grade various types and shapes of fruit, as different varieties require different treatment. The packer has full control of that treatment in such a way that the rollers are left free to spin lightly on ball bearings for flat and round varieties, or driven for conical ribbed fruits. The rollers can be driven at various speeds in conjunction with the variable belt speed. This combination of free or driven rollers, gives that more or less human touch which has been lacking in the past.

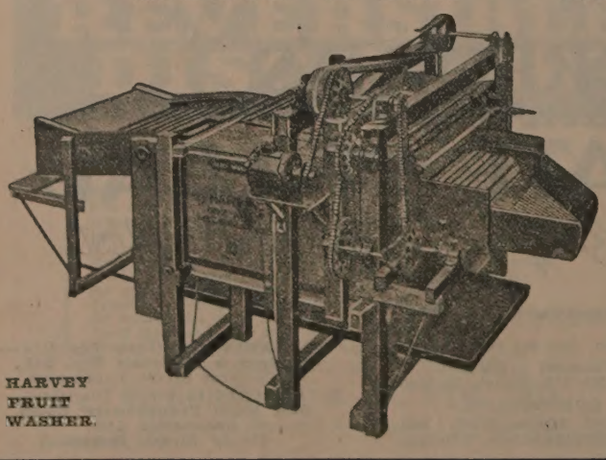


"HARVEY" Model 7CC Grader Right-Hand Feed Front with Harvey Roller Elevator and Automatic Hopper, Case Rails and Packing Stools.

COLOUR AND COUNT GRADING

One of the latest patented features of the Harvey Single-sided CC series Graders obtainable from 6 to 12 bins, is that the Grader is constructed in such a way that it can be placed against the wall with the bins and the hopper and sorting elevator out from the wall.
Another patented feature and a departure from the old principles is that the Harvey elevator delivers the fruit directly on to the grading or low side of the belt instead of dropping it over the high side, which causes bruising.
This layout provides for the future inasmuch that another single-sider can be backed up to the present single-sider, converting the machine into a twin Color Grader.

HARVEY APPLE AND PEAR WASHERS
Arsenate of Lead — Remove Scientifically Without Injury



HARVEY FRUIT WASHER.

The Cheapest and Surest Method of Washing Fruit. Enhances Appearance. NO BURNING—NO BRUISING can take place within the Machine itself, which THOROUGHLY WASHES the Fruit, removing all TRACES OF ARSENATE LEAD POISON and Hydrochloric Acid. As the season is fast approaching, please Order Early to Ensure Delivery.

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Sorting Tables
Special Pear and Lemon Graders
Cannery Graders
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ORCHARD IMPLEMENT SPECIALISTS
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Manufacturers of Leading and Most Complete Line of Cultivating Implements for the Fruitgrower, Vinegrower and Citrusgrower. AGENTS IN ALL STATES.

New South Wales News and Notes

IN THE LEETON AND GRIFFITH ORCHARDS

By Our Travelling Representative.

LEETON

(Continued From Last Issue)

IN last issue our representative reviewed several orchards which he visited in Leeton, Stanbridge and Wamoon. Now he continues along the road to the southward and discovers several well-known growers.

Mostly Level Country.

The country around Leeton is generally level, but there are quite a number of red, sandy rises a few acres in extent (in the native state these were growing box and pine) which are above the channel levels, consequently to get the water on these elevations (5 or 6 ft. up), pipes are put down, carrying the water to the cemented well from which water is raised up to the surface by centrifugal pumps electrically powered. These sandy rises make splendid sites for houses and sheds, being naturally drained and above seepage.

Flooding the rows is the general practice of irrigation in the M.I.A., but where the soil is very porous, other system are adopted. Some have overhead spray irrigation (previously described in Griffith notes) other waters are carried by pipes, laid on the surface which discharge at regular intervals along the course, thus saving over watering.

To the North.

A mile to the north of Leeton is the Lemon grove of enormous trees, heavily laden in front of **Mr. MacClellan's** home on one of these sandy rises. Further along the traveller views, on Mr. Taylor's, some of the world's largest Pullar Cling Peach trees, about 24 years old, still bearing heavy crops. Some limbs are 3 ft. in circumference. Now being sprayed with Bordeaux mixture. Most growers affirm that tar distillate sprays are the best means of combating Green Peach Aphis.

The writer believes that all rubbish should be cleared away from the butts of trees, and some soil also, before spraying at this season, as both Black and Green Aphis harbor on the roots.

There is no doubt that Leeton excels in Peach culture, being second to none. Considerable new plantings, chiefly Queens and Phillips (canning) are in operation.

The sandy rises and irregular contour of these lands are responsible for the channels running in all directions (quite unlike, say, Shepparton). This lends to its picturesqueness, and strangers to the locality are easily nonplussed as to their whereabouts.

Tomato Production.

Extensive preparations are being made for planting out Tomatoes, the land being ridged up and various protection schemes got ready, against frosts.

Tomatoes grown at Leeton are free of diseases that worry the growers further south. **The Leeton Co-op. Cannery** handles the bulk of this crop.

Rows of Peas are showing up everywhere. Light irrigation is also being applied to citrus groves and the recently planted trees, for the weather (at present) continues very dry and frosty.

To the South.

South of Leeton and served mainly by the lower Yanco road, is a group of horticulturists, who are mostly deciduous growers.

Here is **Messrs. Oag's** 60 acres of Peaches, Apricots and Apples, the heavier soil suiting these trees.

Then again, **Mr. A. Enticknap**, an executive officer of the Co-op., and a public spirit of Leeton, who is keen on canning fruits, of which he has 80 acres in bearing and intends further extensive plantings of export and canning varieties year by year.

The tree buds are showing for a big crop in the coming season.

Mr. R. Monfrie's plantation of Granny Smiths and canning Peaches, comprising 30 acres. He also intends making further plantings. Heavy dressings of gypsum have been applied, in addition to manures and cover crops. This property promises to be a profitable enterprise.

Mr. Wilkinson, adjoining the Enticknap estate, has a large heap of gypsum on hand for distribution on the 20 acres of canning fruits and citrus, which is showing the advantages of previous applications, by the friability of the soil and the color of foliage.

Mr. Smith's is one of the show places of this spot, a neat commodious home, surrounded by gardens and perfectly cultured orchards.

Mrs. Juke and Messrs. Attenborough, Ramsay and Johnson are all producers of canning fruits and Sultanas, the latter making splendid growth and yielding heavy crops. This locality is splendidly adapted for the growing of deciduous and vines, the soil is a rich red of good depth.

In the North-East.

To the north-east of Leeton, near in to the town, is another group of growers, who are Peach specialists. These folk intend to increase their orchards by planting canning Pears and Grannie Smith Apples.

Mr. S. R. Mort, farm 126, has eliminated all stone fruits on this property, with which it was originally planted by the previous owner, replanting with Apples and Pears. He has 26 acres of Apples, mostly Grannie Smith and 14 acres Pears, mostly Williams and Bon Chretien.

The estate is an example of expert management. When Mr. Mort purchased this property he was quite a novice in orchard culture, but he carried out the advice and instructions received through the "Fruit World," and is now one of the leading growers in this fruit producing district. About half the property is in full bearing, producing quality fruit, and a cool store and packing shed have facilitated handling the crops.

It has been stated that the Leeton Cannery can handle more Pears than are locally grown—consequently orchardists on the heavier soils contemplate planting W.B.C. to supply this demand.

The homestead of Mr. R. J. Piper, Hanwood, N.S.W. Considered to be the ideal house for summer climate. Note the Lemon tree hedge in front of house; a Mandarin hedge is growing at the back.

GRIFFITH

LAST issue took our representative through several fine orchards to the south and west. From Mr. A. Day's Farm 131 he continues:

Mr. W. Rawlings, of the Water Commission, has a manager on his extensive orchards and vineyards, situated on the Darlington Pt.-road, 3½ miles from Griffith. He does not reside here, but is living at Leeton. Like other prominent and successful horticulturists of the Riverina Irrigation Areas, he has erected a residence for his employees on the property.

Messrs. Beverley & Sons, 2½ miles south of Griffith, are specialists in citriculture on their 37-acre estate, growing Shaddocks, Citrons, Lemons, Mandarins, Valencias, Thompson and Washington Navels.

A good general crop of fruit is now in evidence and, unlike some growers they do not harvest the crops until ripe, consequently purchasers are sure of toothsome sweetness when buying the Beverley label.

An overhead system of irrgation has been installed throughout, provided for by 2½ miles of main (7in.) and sub. (4in.) galvanised piping carried into various sections, on upright poles provided for the purpose. Here again the local Cypress Pine is brought into use. These uprights are placed in line with the trees, about 3 or 4 ft. out from the butts and at right angles to the mains.

These mains and sub-mains are spaced at appropriate intervals, the laterals, which are moveable, are laid at right angles to the sub-mains, one end being connected to the sub-mains, the other stopped with a cap. These laterals are laid on one side of the sub-main during the watering of a section and when this section is finished, are dragged to the opposite side for another section, the cap being removed and placed on the other end, the first capped end being uncapped and attached to the sub-main. These 1in. galvanised iron pipes have orifices punched in them in such a manner as to give an even distribution of rain-like spray, and can be placed with the elliptical orifice upright or at any angle, it just depends whether there is any wind.

One great advantage of this method is that depressions in the soil receive the same water as the rest, making the job uniform. Also no drains, furrows, or head ditches, which are a source of menace to the orchard, are required. Of course, pumping water and equipping this scheme is a big initial cost, but in the long run is an economic provision. Messrs. Beverly's pumps deliver 25,000 gallons per hour, or an equivalent to two acre feet per day. So it will be seen that by continuous pumping the whole can be given a two-inch watering within four days.

A citrus nursery is here, and worked as required. The stocks favored are Trifoliate, Sweet Lime and Indian Lime, and are used as experience has taught.

Vigor is the order of the day throughout the groves—a short row of varieties in Nectarines is near the nursery, these three-year-olds making 10ft. of heavily budded wood for the season.

Mr. Frank Beverley conducted the writer over the estate, and explained methods and experiments, one being the cincturing of Grapefruit, which has proved a success.

Mr. Beverley is considering the extension of his poultry business, realising the benefits to the orchard, the home and the pocket.

Tick Beans are regularly sown with super. for Spring turning under, thus keeping the physical and structural condition of the soil up to par, as well as fertilising it. Mr. Beverley, Senr., is the senior orchard instructor for the district.

Mr. B. Smellie, late of the A.I.F., now a progressive orchardist, near Griffith, N.S.W., has planted the whole of his 45 acre holding with table and wine Grapes, Peaches, and citrus. He spoke in high terms of tar distillate as a control spray for Aphis in Peaches, applied about the second week in July. Since using this spray no aphis has appeared later in season, as they did previously, keeping these pests controlled, until the hot winds come along to continue the job. Green cover crops with super. is the custom here.

Tremendous growth of Cape Weed is also showing, all of which will be turned under in the early Spring.

Mrs. E. M. Jones, relict of Mr. Jones, who established the Beelbangera winery, has handed over the orchards and vineyards, in several parts of the district, to her sons, who trade as Jones Bros. Their lands aggre-

Gerrard Sales and Service
The Gerrard Fruit Packing Charts for Apples, Pears, Citrus are available, post free, on application.
Write: GERRARD WIRE TYING MACHINES CO. PTY. LTD.
18-24 Ireland St., West Melbourne, C.3
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TOWNSVILLE — HOBART
GERRARD The Tie That Binds

gate 170 acres; citrus, table and wine Grapes, Apricots, Peaches and Granny Smith Apples are cultivated.

In alternate years, heavy cover crops are grown. In the other years the land is disced and left in an open state for aeration.

Messrs. Williams and Wright, who have combined forces in the working of their orchard 3½ miles from Griffith, cultivate 60 acres of fruit, specialising in citrus. The results of cover legumes is very evident. B. and B. manures are favored, because with this fertiliser the trees do not hunger when the covers are first turned under as they do when super. has been used, the nitrogen not being available until decomposition sets in.

WOOD WOOL
Finest Grade for Export Fruit.
STRAWBERRY BOXES.
and Fruit Containers.
Prices and Particulars on Application to
AUSTRALIAN BERRY BASKETS CO.
175 Kent Street, Richmond, Vic.
Tel. J1263.

Mr. Williams is Chairman of Directors to the G.P. Co-op. Co.

Mr. Fallon, whose 40 acre orchard is opposite to Bishop's and Boundy's, is enthusiastic about the future of fruit culture on the Murrumbidgee Irrigation Areas. He is fully convinced of the necessity of keeping citrus trees pruned sufficiently to maintain shape and balance, and to space the limbs to admit sunlight right through the growth.

Under this system, blight and scale control is easier and a general setting of fruit more likely.

Peas for market are grown between the rows of young trees, and the haulms ploughed in as soon as the bulk is harvested. These have proved a very remunerative side line.

In this district the practice of tying straw, paper or bagging around the trunks of young citrus trees, also of earthing up as a frost damage preventive, is common; also the placing of bagging on frames over trees that are being re-worked is necessary to protect the new shoots.

"Selbest Packing House," established seven years ago by **Mr. Field Newton,** is situated on Darlington Pt.-road, right in the heart of Griffith, N.S.W.

Being centrally situated and capably conducted, it has grown from a comparatively small beginning to its present large ouput. Faultless equipment of the packing house, courtesy, prompt and expert service, are some of the factors which have led to success.

Growers are assisted financially when necessary, and supplied with cases, paper, nails, etc., of which large stocks are always on hand.

Fruit is stored for the growers and forwarded when markets are at their best. Fruit is also bought straight out for cash, and marketing advice given gratis.

The ground floor space, abutting on to the metalled road, has an area of 8,000 square feet; this is the packing department, case making at the rear, with offices upstairs.

A complete record of every case of fruit is kept, and can be seen at a glance, showing grower's name, receiving, storing, packing, inspection, consignor, consignee, destination, date of sales, a/c sales, and payments, etc.

A distinctive "Selbest" label is on each case, denoting number, grade, variety and grower.

Woolly Aphis

This pest provides a singular illustration of nature's strange ways, in that it produces both winged and wingless females, the former laying a single egg from which an aphis is hatched and the latter producing successive generations of young aphides alive.

The woolly matter so often seen on trees and shrubs is an excretion from glands on the back of the females. The depredations of the Woolly Aphis may be controlled by spraying in July or by a further spraying in the Spring time if they appear again during this period.

During the manufacture of Dunlop Spray Hose every detail is controlled to ensure a finished product which is flexible, non-kinking, age-resisting, and has the ability to withstand higher pressures than any hose of a similar type.

Actual tests carried out in the Dunlop Perdriau Factory show that Dunlop Spray Hose will withstand pressures up to 1800 lbs.—six times the pressure recommended by experts to ensure effective spraying without waste from misting.

These facts together with an examination of the section of Dunlop Spray Hose illustrated below provide ample reason for its use by Orchardists for whom only the best is good enough.

(1) A tough cover which protects the hose against heat and abrasions.
(2) Four plies of super-strong rubber impregnated cords.
(3) Insulating layer of heat-resisting rubber between each ply.
(4) Inner tube of rubber specially compounded to resist acids and oils which would destroy ordinary rubber.

The longest-lasting, most dependable Spray Hose you can buy.

Dunlop

SPRAY HOSE

F.82-27

N.S.W. Seasonal Report.

A REPORT received from the N.S.W. Department of Agriculture, covering seasonal conditions at the end of August and beginning of September, states that good rainfalls were reported over most of the State.

Frost damage made prospects somewhat doubtful at report, but bloom indications for Apples were satisfactory with Pears somewhat below normal. An early season was predicted for the Northern Tablelands.

Budding, while very satisfactory on Pears, was only moderate on Apples around Orange. Granny Smith and Jonathan showed fair prospects at Young, Rome Beauty and Delicious gave indications of heavy bloom, but Democrat and King David were very light. Packham's Triumph Pears were showing very well; Williams were patchy, and other varieties ranged from moderate to light.

Satisfactory development was noticeable in the orchards around Batlow, whilst on the Murrumbidgee Irrigation Area, both Apples and Pears promised to blossom satisfactorily.

So far as stone fruits were concerned, the position was pleasing, budding for the most part being good to heavy. In a few instances some of the early Peaches, noticeably at Young, were said to be light. Generally good to heavy budding of Cherries was apparent around Orange and Young.

Very profuse blossoming of Apricots was taking place on the Murrumbidgee Irrigation Area, but it was too early to forecast the extent of setting likely. Peaches were also blooming freely.

Seasonal conditions were very satisfactory in Coastal orchards and the blossoming of early varieties of both stone and pome fruits generally was heavy, while flowering indications of later-maturing sorts were also pleasing. It is expected that the setting will be good, although in a few localities rain, during the blooming period, may affect prospects of Apricots and some Plums. Strawberry crops in the Camden-Penrith area were developing and blossoming satisfactorily.

Favorable weather was experienced throughout most citrus areas. In coastal districts trees were showing new growth and reports indicated that good to heavy bloom was expected to be general. The bulk of the main crop of Navels had been cleared. Some harvesting of Valencias was taking place, while picking for export was proceeding at Gosford. Fair quantities of second crop Navels, Valencias, Common Oranges and Mandarins are in sight in a number of localities.

Beneficial rains were received during August and, generally speaking, weather conditions favored fruit development in Bananas. In the Lower Tweed area, Bananas were filling well and supplies were expected to increase during September. Medium markets of fair quality were likely from Mullumbimby, but it appeared that only light consignments would go forward from Coffs Harbor.

Passionfruit: Crops were looking well at Tweed Heads, but were progressing much slower than was anticipated at Mullumbimby, where they were expected to be later than usual. In the latter district, early flowering was very light and fruit set sparsely; the warmer conditions at the end of August, however, promoted more rapid flowering.

In the Parramatta-Camden district vines have come through the Winter with no apparent frost damage and were growing well. Fruit was being harvested steadily in the Baulkham Hills locality.

New South Wales

Fruit Industry Enquiry

Activities of Fruitgrowers' Federation — Control of Markets Should be Vested in a Trust — Necessity for Fruit Publicity Campaign — Improvements in Marketing Needed.

AN OFFICIAL ENQUIRY into the fruit industry of N.S.W. is now being conducted.

The Government of New South Wales has appointed Mr. J. E. McCulloch, Stipendiary Magistrate, a Commissioner to enquire into the fruit industry of this State, and make recommendations with respect to:—

a. The costs and method of production, and of marketing, and of sale and other disposal of fruit grown in New South Wales.
b. Improvement in the financial position of the fruitgrowers in New South Wales, and
c. Manufacture and sale or other disposal of by-products of fruit grown in New South Wales.

The Commissioner is also required to investigate and report upon matters associated with the orchard and nurseries registration fee.

Evidence is being called on all phases of the industry, and it is generally felt that the enquiry should do a lot of good.

Col. Ernest E. Herrod, Secretary of the Fruitgrowers' Federation of N.S.W. was one of the first witnesses. He said that organisation of the industry was fairly complete, except in its commercial aspects. The Federation had tried to initiate helpful movements. In 1921 the Fruitgrower's Co-operative Society was launched, but it failed through lack of support. In 1922 the Central Citrus Association was formed, and it operated for about five years. From 1922 till 1926 there was in existence the Advisory Board formed by the Government. This was abandoned when the Fruitgrowers' Association of N.S.W. became the Fruitgrowers' Federation of N.S.W.

In 1927 the Federation first received its revenue from orchard registration fees.

The Co-operative Bud Society formed in 1928 had performed good service.

In 1930 an effort was made to raise funds for citrus publicity, but the movement ceased because of limited support.

In 1932 an effort was made to co-ordinate bulk loading. The proposals, however, were abandoned though, as a result of the discussions, improvements were effected. The attempt to organise an empty fruit case exchange was not proceeded with because of the difficulties encountered. Also in 1932, the Federation organised growers selling in the City Markets, with the object of improving their conditions, but the proposal was dropped. **A marketing representative had been appointed in 1929, and the issuing of market reports had now become a valued feature.**

In 1934-5 a scheme to improve market conditions for Cherries from Young and Orange was abandoned because of opposition.

In 1935 the Federation endeavored to secure a Fruit Industry Marketing Organisation Act, but this proposal met with considerable opposition, even after several amendments, and was not proceeded with.

The Federation believed that the control of the markets should be removed from the City Council and vested in a trust representative of the Government, producers and distributors.

Citrus Problems.

Mr. Herrod, continuing, stated that the prospects for the export of citrus to the United Kingdom were not bright, even taking into account the bounty of 2/- a case.

The general position was that in heavy production years, more Oranges were produced than could profitably be consumed. A publicity campaign was needed.

The Hon. Secretary of the Citrus Growers' Defence Association (Mr. F. Bryant) stated they were preparing their case, which would be ready early in October. Witnesses would appear from various districts.

Mr. L. T. Pearce, market representative of the Federation, detailed many of the difficulties at present experienced in relation to the administration of the Farm Produce Agents' Act.

The Commissioner has visited some parts of the State, and will make a complete inspection, obtaining evidence from all sources available.

OVERSEAS CHRISTMAS MAILS.

The Deputy Director, Posts and Telegraphs reminds readers that the time has now arrived to prepare Christmas gifts, and greetings for despatch to relatives and friends in the United Kingdom and Europe.

To ensure delivery of parcels before Christmas, they must be posted in time to reach the General Post Office, Melbourne, before noon on Monday, November 8, when the mail closes for despatch per the R.M.S. "Orion."

The last mail for letters and packets for delivery before Christmas in the United Kingdom and Europe will be despatched per the R.M.S. "Moldavia." Letter and packet mails will close at Melbourne on November 18.

Although the "Moldavia" mails will reach London on December 18, the public is exhorted to post Christmas mail for the United Kingdom and Europe in time for despatch per the R.M.S. "Orion" as there will be a large accumulation of mail matter for delivery in the United Kingdom and Europe during the Christmas week. Mails for despatch by the "Orion" will close at the General Post Office, Spencer-street, Melbourne, on November 11.

ORANGE (N.S.W.) HAS RECORD YEAR.

Substantial Rebates to Growers.

The 12th annual meeting of the Orange Producers' Rural Co-op. Society was held on September 24, when about 600 growers were represented. Several thousands of pounds in rebates are reported to have been made, and the season was quoted as the best on record. The annual turnover was far in excess of that of last year.

The following Directors were re-elected:—Messrs. R. H. Greene, G. Hawke, C. E. Hawke, W. B. Pascoe and D. Plowman. The rest of the Board consists of Messrs. A. U. Tonking, W. J. Nancarrow, D. H. Hawke and A. McClymont.

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Foremost in the Orchard!
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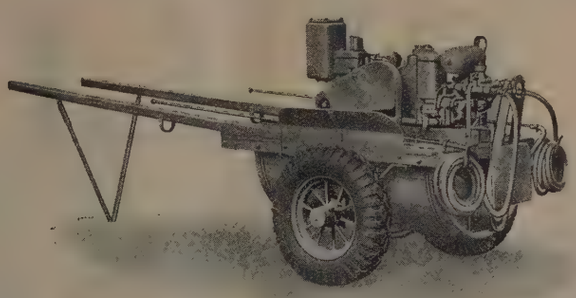

FOR more than a third of a century Ronaldson-Tippett designers and engineers have built the latest and most advanced Spraying Plants. Closely associated with orchardists all over Australia they are in a position to know the newest developments and wants of the Australian Fruitgrower . . . now, Ronaldson-Tippett give you the most modern and advanced Spraying Plant . . . equipped with pneumatic tyres. Write for full particulars of this outstanding development in orchard equipment.

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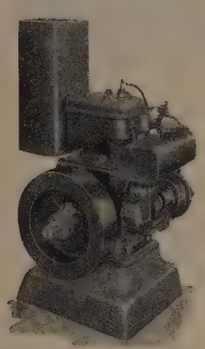
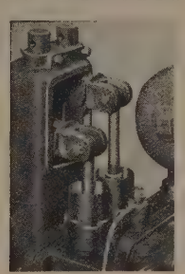


ENGINE is one of the famous Ronaldson - Tippett Type N, renowned throughout Australia for life-long reliability. Has no equal for cheap running and accessibility.

DRIVE is specially designed quality-made chain. Totally enclosed and well oiled. Will give years of lasting service, without any repair expense.



PUMP CYLINDERS are of exclusive design, special stainless steel, ensuring longest possible life not only to the cylinders themselves, but also to the pump leathers. Easily replaceable and renewable.

AGITATOR is special four-bladed propellor type which ensures perfect agitation of all mixtures. Shaft is rustless bronze carried in large bearings.

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RONALDSON BROS. & TIPPETT PTY. LTD.

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NOW NOW

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is the time to apply

SULPHATE OF AMMONIA

"The ideal NITROGEN Fertiliser"

APPLY NOW

DRESSINGS

CROP.	RATE.	CROP.	RATE.
Apples	1½-3 lbs. per tree.	Vines	1½-2 cwts. per acre.
Peaches	1½-2 lbs. per tree	Potatoes	1 cwt. per acre.
Pears	2½-4 lbs. per tree.	Vegetables	1-2 cwts. per acre. (½-1 oz. per sq. yd.)
Citrus	6-10 lbs. per tree.		
Passion Fruit	½-1 lb. per vine.	Flower Garden	½-1 oz. per sq. yd.
Berry Fruits	1-2 cwts. per acre.	Lawn	½-1 oz. per sq. yd.

APPLY NOW

If your Trees or Crops require a Complete Fertiliser apply

the 2:2:1 Mixture

at *DOUBLE* the above rates.

NOW NOW

ORDER YOUR SUPPLIES

from your Fertiliser Dealer.

H 36/37

Canned Asparagus

PROCESSING METHODS.

From the Shoot to the Table.

THE Asparagus plant, or "fern," tends to grow with quite a short stumpy stem under normal conditions, but when planted deep in the ground—say, 10 to 12 inches—this stem lengthens and remains colorless, except when the shoot or "spear" peeps out of the soil and is exposed to sunlight. This lengthened stem, with the green or slightly purple spearhead, is known to the trade as the "grass," and in order to keep it bleached free from color, it is continually earthed up during growth. The more earthing up that is done, the longer and more slender does the "grass" become.

When the Asparagus arrives at the cannery, the first process is that of cleaning, which is usually done in tanks containing cold or slightly warm water. The "grass" has to be handled very carefully during this process, as the "spears" are very delicate. After washing, the "grass" is graded for size—i.e., thickness of stalk—and at the same time any that are discolored or stained are sorted out. They are then placed together and tied into bundles after which they are cut to the correct length in Asparagus cutters. This cutting to length is an important point, as there is a shrinkage in length after processing. Therefore, in order to avoid any undue risk of damage due to vibration in transit, the stalks should be left as long as possible.

Blanching.

After grading and cutting, the "grass" is blanched in boiling water for three minutes. With young and tender material this three minutes blanch in boiling water would make the "spears" so fragile that it would be impossible to pack them without considerable disintegration. Therefore, the bundled "grass" is placed in shallow woven wire trays, fitted with lids, and immersed in the blanching tanks, so that the water does not reach the "spearheads"; only momentarily is the whole "grass" immersed. Immediately after blanching, the baskets are withdrawn and immersed in cold water. It is important that this cooling should be done immediately after the blanching, as here, too, it is very easy to over-cook the Asparagus, with the result that it is impossible to produce a "quality" pack. The blanching water must not be too alkaline, otherwise the Asparagus may become stained. Therefore, in factories where the water is unduly hard (above about 15 deg.), it is advisable to add a small amount of citric acid to the tank liquor, in order to correct the alkalinity and to ensure that this staining does not occur.

Filling.

The Asparagus is then carefully filled in to bottles, with the "spearheads" pointing towards the bottom. It should not be forced in, as after blanching it is rather delicate, and it is very easy to break the tips. Un to the stage of filling, the various grades should be kept separate, but, when filled, the bottles are usually not segregated into various grades. The amount filled in each bottle will, of course, depend upon the grade, but in the standard bottle it varies from about ten pieces for the large grade to as many as 30 for the smaller grade.

Although with soft water it is not essential to acidify the brine, the staining effect which was mentioned in connection with the blanching is also liable to occur during processing, if the acidity is too low. It has been found in America that the critical pH above which staining is likely to occur is about 6.1. As the final pH of the liquor is only slightly more acid than this, most packers consider it advisable to add a certain amount of citric acid to the brine, in order to adjust the pH to about 5.5, which will allow an ample safety margin. For soft waters, about 0.05 per cent. of citric acid is sufficient to add to the brine, but with harder waters this amount may require to be doubled, further, this increase in acidity is a considerable help in sterilisation, and it affords a protection against bacterial spoilage and fermentation.

The strength of brine used for Asparagus varies considerably, some packers using 2 per cent. of brine and others twice this amount.

After filling with hot brine (180 deg. F.), the bottles are exhausted for four to six minutes in an ordinary exhaust box at 180 deg. to 200 deg. F. The bottles are then immediately closed with a metal cap and passed to the retort for processing. If the Asparagus is being canned in stead of bottled, the operation is much the same, but square cans should be used, as this enables the canner to make a much more compact pack than if the ordinary round cans were used. In any case, it should be the object of the factory to fill as compactly as possible, in order that the damage in transit may be reduced to a minimum. There is a great art in filling Asparagus correctly, and due allowance should be made for any contraction which occurs during processing.

Processing.

Processing should be done immediately the bottles or cans are sealed, as at the high temperature at which the bottles emerge from the exhaust-box, over-cooking is liable to occur, and apart from a loss in color, the final result will be a "mushed" product. If bottles are being processed, they should be packed in wire trays and stacked (in a staggered manner) in the autoclave. The usual time of processing is 25 to 40 minutes at 240 deg. F., depending upon the tenderness of the raw material. If bottles are used, it is essential to employ pressure cooling, otherwise serious loss will occur, due to the metal tops flying off. The finished product must then be cooled immediately to prevent further cooking. Bottles and cans should be stored in an inverted position—that is, with the "spearheads" pointing upwards. Too much emphasis cannot be placed upon the delicacy of Asparagus, and the process should be carefully controlled through the blanching, filling, exhausting and sterilising process, in order to make sure that the product is not so tender that it will break up into a "mush" in transit.—("Australian Food Manufacture.")

Exports to August 31

The export of canned fruits from Australia from January 1 to August 31, 1937, have reached the record total of 1,373,375 cases of 2 doz. 30 oz. tins, or equivalent. The destinations and quantities were as follows:

Country.	Apricots.	Peaches.	Pears.	Fruit Salad.	Pine-Apples.	Total.
U.K.	77,544	543,171	591,560	760	13,862	1,226,897
N.Z.	10,297	28,726	13,783	28	1,193	54,027
Canada	6,882	45,929	2,996	2,745	12,772	71,324
East	2,712	6,978	4,778	1,550	116	16,134
Miscellaneous	896	1,632	2,174	40	251	4,993
Total	98,331	626,436	615,291	5,123	28,194	1,373,375

Advertising Australian Canned Fruits in a provincial store in England. 37 trained demonstrators operated throughout the country last year.

SHEPPARTON'S NEW BEACON.

Placed on Cannery.

With the consent of the Civil Aviation Board, an aerial beacon has been erected on the roof of the S.P.C. Cannery at Shepparton. It is claimed to be the largest installation of its kind in Australia. The Beacon rises to the height of 110 feet from the ground on a steel tower 77 feet above the building. It is lighted with 12 Neon light tubes, each 12 feet high and automatically flashes the Morse code letters SH, which is the official call sign for Shepparton.

It is an official beacon, and will be recorded on all aerial maps and guides. The letters S.P.G., each 7 ft. in height, appear vertically down each side of the tower. The beacon will be visible from 40 to 50 miles at night.

The Bave-U Power Sprayer

For Over 25 Years Russell Sprayers

— Have Set the Standard —

RUSSELL & CO. Manufacturers BOX HILL, VIC.

Compost at Low Cost

Helping Nature

COMPOST manure, at a cost of 4/6 a ton, is the figure given by I. E. Farrar, of the La Sierra Alfalfa Ranch. Mr. Farrar has been making compost manure for the past three years, and expects to have about 700 tons this year. Low cost is due to the use of such material around the farm as Alfalfa leaves, weedy hay, grain straws and barnyard manure which usually go to waste, says "Citrus Leaves" (U.S.A.).

The compost manure has an analysis of approximately 1 per cent. nitrogen and 20 per cent. organic, which is about the same nitrogen content as Lima Bean straw, and almost double that of local dairy manure. The organic content is rather low in the compost. The compost has an organic-nitrogen ratio of 20:1, which is the ratio found naturally in soils. Its use does not temporarily depress the nitrate content of soils as does the use of straws and other bulky materials with a wide organic-nitrogen ratio. This is a decided advantage where manures must be applied shortly before planting a crop.

Following is a brief description of the method used by Mr. Farrar in making compost. To aid in the decay of the composted materials, a reagent is added to the material. This reagent consists of a mixture of 50 pounds of sulphate of ammonia, 70 pounds of agricultural gypsum, and 25 pounds finely ground limestone. The above mixture is used for each ton of compost material. The material to be composted is placed in piles seven to eight feet wide, two feet high and of any convenient length. On top of this is scattered the proper amount of the reagent. Then another layer of material is added, bringing the pile to a height of three to three and one half feet. Again the proper amount of reagent is scattered over the top. The pile is topped off with a thin layer of fine material to reduce the escape of ammonia gas formed in the decay process. If the piled material is not already wet from rains, it will be necessary to sprinkle the pile. This can be done when the material is being piled, wetting it each time after the reagent is applied.

By starting the compost in late December or early January (in U.S.A.) it is usually necessary to wet the piles down at the start, but the rainfall should be ample to keep up the moisture, which is necessary for best results. The reason for starting this work at this time of year is that the Winter temperatures, together with the rainfall and natural humidity, have a tendency to prevent the compost from becoming overheated. Carbonising will take place if too high temperatures are produced on the inside of the pile.

THE DIFFERENCE.

To-day we dodge upon the street
The motors that would run us down,
And with a deal of mental heat
We say bad things, and fiercely frown.

To-morrow in our new machine
We watch the other fellows jump,
And with a countenance serene
We smile, "Keep off the road, you chump!"

Apples in Sydney

Problem of Over Storage.

During the latter half of September, many thousands of Apples were received at Sydney which the trade found very difficult to clear at any price.

A leading member of the Sydney fruit trade stated that of one shipment of 25,000 cases, at least 5,000 were unfit for sale—i.e., 20 per cent. of the shipment. The varieties included Scarlets, Geeveston Fanny, Democrat, Delicious and Jonathan. The fruit was spent and lifeless. Both shed-stored and cool stored Apples were included.

It is understood that some of this fruit found its way to processing factories, others brought 3/- and less per case. It was noted that some of these Apples were being retailed from barrows at 15 for 3d. But it was a bad advertisement for Apples, especially during the progress of the publicity campaign.

This whole question of overstorage and the marketing of Apples—later than the normal season for varieties, is one which growers must give attention. The marketing of stale, tasteless Apples will inevitably lessen the public demand for this fruit.

Honduras: Banana-leaf disease has seriously affected production in the last two years. Strenuous efforts on the part of growers has been effective, and Banana shipments in April totalled 1,150,239 stems as compared with 1,034,118 in the same month of 1936. The report also states that importations from Japan increased 100 per cent. in 1936, while imports from U.S.A. declined 10 per cent.

450,000,000 Apple Trees in the World

U.S.A. Leads in Production.

The United States is the largest producer and exporter of Apples in the world, according to the Bureau of Agricultural Economics. On an average, during the five years 1931-35, approximately 31 per cent of the world Apple production of 500,000,000 bushels was produced in the United States, says the "Packer" (U.S.A.).

Of the average of 155,000,000 bushels of Apples produced in that five-year period in the United States approximately 84,000,000 bushels (54 per cent. were consumed as fresh fruit, about 6,000,000 bushels (4 per cent.) were canned, roughly 3,000,000 bushels (2 per cent.) were used for making brandy, about 7,000,000 bushels (4.5 per cent.) were dried and evaporated, and about 55,000,000 bushels (35.5 per cent.) were used for other Apple products (including vinegar and cider), used on the farm fed to stock, or left unharvested.

There is a total of roughly 450,000,000 Apple trees in the world one-fourth of which are in the United States.

The trend of Apple production in U.S.A. has been downward for several years, but world production outside the United States is on a slightly upward trend, particularly production of Apples for dessert purposes.

World trade in Apples in the last few years amounted roughly to 33,000,000 bushels, of which the United States supplied approximately one-third. The next most important exporter is Canada, supplying about one-fifth of the total exports.

Chilean Nitrate of Soda

Chemically Ideal
Mechanically Perfect
Promotes Vigor
Increases Yield

The natural Nitrate Nitrogen Fertilizer with the vital elements in Nature's own blend and balance.

GUARANTEED PURITY 98/99%

100% EFFICIENT

Prevents soil acidity. Is completely soluble. The natural Nitrate Nitrogen being immediately available to the plant.

NOT A SINGLE GROWER WHO HAS USED IT HAS ANYTHING BUT PRAISE FOR CHILEAN NITRATE OF SODA.

Fruit - Vegetables - Pastures

Enquiries—

CHILEAN NITRATE OF SODA

G.P.O. Box 2037 L Sydney

Cold Storage In Australasia

Cold Storage of Tomatoes

Interesting Test at Sydney

Picking and Packing Must be Carefully Done

VERY interesting results were obtained by Mr. Willis J. Williams, B.Sc., Superintendent of the City Municipal Markets, in respect of experiments recently carried out in the cold storage of Tomatoes. Several cases of Tomatoes were placed in cold store with a view to obtaining information regarding those grown in the vicinity of Sydney, New South Wales.

The picking of Tomatoes was carried out during the last week in May, but unfortunately the fruit was pulled away from the stalk and this proved detrimental to the cold storage of the produce. Mr. Williams points out that the stalk should be cut as close to the fruit as possible, thus leaving a very short stalk attached to the fruit, which would avoid the development of mould. Apart from the loss of juice and the cracking of this part of the Tomato, it was proved conclusively that mould developed on this portion of the fruit after being in cold store.

The packing is equally important; in some cases the fruit appeared to be forced into the cases, causing a certain amount of bruising. On the other hand, it is advantageous to pack the fruit firmly. When packing for cold store it was also proved to be an advantage to wrap each individual fruit in paper.

The Tomatoes were fully grown. Some were green and some had a slight color in evidence; some had a fair tinge of color all round the fruit, but none could be described as fully ripe.

The temperature used for the experiment was 36 degrees F. The highest reading was 37 degrees, and the lowest 34 degrees, but the temperature maintained was very steady and even. The humidity throughout the experiment ranged from 80 to 85 per cent. An air circulating room was used and the air passed over a brine battery.

The length of the test was six weeks, and an inspection was made every seven days. At the first examination after seven days no perceptible change was noted, but at the second examination, which was made after fourteen days, there was a slight advance in the color of the majority of the fruit.

At the end of twenty-one days there was a further increase in color —in about one-half of the fruit — while the other half remained quite green. A trace of mould was noted where the fruit had been broken away from the stalk, but there was no sign of breakdown.

At the end of twenty-eight days the appearance was still good, and there was a further advance in the color of the fruit. Some were taken out of store and kept in the air temperature and there was a further slight advance in the ripening process. Most of the fruit that had colored could be described as half ripe.

At the end of thirty-five days, there were signs of some external breakdown and the ripening of the majority of the fruit had progressed. Some, however, were still green. There was a greater development of mould at the point where the stalk had been removed, but it was definitely confined to that part of the fruit. Those taken out and left in the air temperature kept in good order and condition for a few days. Definitely, this was the extent to which the fruit could be kept and was proved by keeping the balance in the cold store for a further week.

At the end of forty-two days mould growth had developed and was apparent on some of the fruit that was breaking down. It was noticed that the fruit that had been packed very green was still green and had not ripened in ordinary air temperature after seven days.

Mr. Williams summarises his conclusions as follow:—

1. Tomatoes used in this experiment kept in good order and condition for a period of five weeks, and for a further week in ordinary temperature.
2. The test proved that with a temperature of 36 degrees and a humidity of 80 to 85 per cent., five weeks was the limit for cold storage of these coastal grown Tomatoes.
3. The picking and packing must be done with great care, and the stalks left on the Tomato.
4. Mould will occur when stalks are not left on the fruit and at that point.

More Cool Storage Space

Government Accepts Private Enterprise

FOLLOWING the destruction by fire of the Government Cool Stores at Victoria Dock, Melbourne, it is estimated that approximately 450,000 cubic feet of cool storage space will be needed to take care of all requirements of cool storage during the export season.

The Government appointed a committee to investigate the position following the fire in which between 600,000 and 700,000 cubic feet of accommodation was lost. The committee consisted of representatives of producers of dairy produce, meat, fruit, eggs, cool store owners, exporters and merchants and officers of the Department of Agriculture.

The committee reported that the greatest storage space is required between November and April, the peak month being January. The offers of the Associated Cool Stores of Victoria to supply accommodation of 280,000 cubic feet, and the Metropolitan Fresh Food & Ice Co. to provide 150,000 cubic feet of storage space were considered to be sufficient and would obviate Government rebuilding at Victoria Docks at present. The space of the Associated Cool Stores would be utilised for the storage of export fruit, while the Metropolitan Co.'s space would be devoted to general storage.

In accepting the above offers, the Government will not rebuild at Victoria Dock unless or until such action becomes necessary. The insurance money received will be held in trust for such necessity when and if it is required. The new arrangement provides for space at district and suburban cool stores and rail and water refrigerated transport to and from all cool stores affected by the plans outlined.

NEW COOL STORE FOR SOURABAYA, JAVA.

The Australian Trade Commissioner in Netherlands India has advised the Department of Commerce that the Java-China-Japan Line, the important Dutch shipping service between Java and Japan, has decided to erect cool storage accommodation in Sourabaya to store ships' supplies. Up to the present the company has obtained most of its requirements of this nature in Hong Kong.

This development will probably result in an increased demand in Java for perishable goods, and it is understood that Australian produce will be used to a large extent. Mr. Critchley was informed that before deciding to establish the cool store in Sourabaya, J.C.J. Line representatives ascertained that Australian exporters were in a position to supply most of their requirements.

Some increase in Australia's trade in frozen meat, fresh fruit, frozen butter, etc., to Netherlands India may, therefore, be anticipated in the near future.

APPLES AND PEARS IN COOL STORAGE.

Comparison Last Three Months.

The Government Statist advises that the quantities of Apples and Pears held in Victorian Cool Stores at the end of June, July and August, were as follow: figures represent cases:—

	June.	July.	Aug.
Apples ..	1,150,000	1,030,000	850,000
Pears . . .	128,000	108,000	67,000

California produces 27,000,000 quarts of Strawberries per year, an average of 4,700 quarts per acre.

FRUIT BUYERS

LEMONS, ORANGES, GRAPEFRUIT, PEARS, PEACHES, APRICOTS, BERRIES, CHERRIES.

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ARE YOU GRUBBING?

Previous experience had convinced me that to be really efficient a grubbing machine should have ample power and ropes that will meet the heavy demands required of them. I found that shovel and axe work is very costly either by itself or in conjunction with a machine. The machine that offered these features, with a host of others, was THE "MONKEY" GRUBBER.

It gave me the power of 260 pairs of hands in a simple and compact form; the lever is short, so that I am able to stand firm-footed and get the full stroke. There are two speeds in the machine, as well as an automatic release that allows me to let off a strain, or as the machine will work in any position, it comes in for all jobs that would require a chain block. It is taken to the job on a pair of wheels like a barn truck, and is rigged for work in a few minutes. The ropes are in lengths that I find easy to handle, and each one is fitted with hook and loop couplings, so simple and absolutely IT for effectiveness. The makers have included a sturdy snatch block with a novel method of securing to the ropes, and also a fine type of firm gripping rope shortener. The latter makes it very easy to accommodate the lengths of rope to the tree or stump being pulled, and is quickly released from the rope. The combination of so many time and labor saving features makes the "Monkey" Grubber a superior grubbing outfit.

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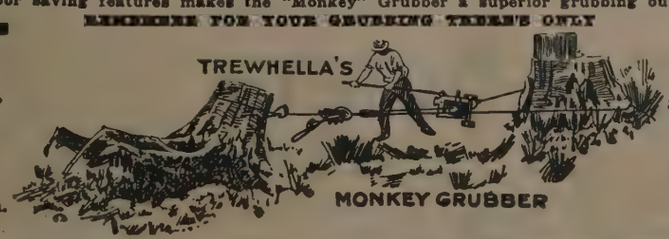

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It earns its Famous LOW PRICE in a Few Days
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WITH A
"DIGGER" WINCH
A Man can uproot more Trees and Stumps in a Day than he would dig out in Ten Days
QUICK MANUFACTURING CO., 75 Penders Street, Thornbury, Victoria

How to be free of MONEY TROUBLES

THE early days of married life are the time when a man should start to build up his assets so that he may be always free from financial anxieties.

Responsibilities come with the years, but a man can arrange to have these responsibilities sit lightly on his shoulders. By becoming a member of the A.M.P. Society he can make such immediate provision for the future as he and his wife desire.

A certain member who married in 1912, when he was nearly 36, took out an A.M.P. policy for £1,000 for the protection of his bride. It has been a comfort to both of them ever since, and if he were to die to-morrow his wife would receive £1,681, so greatly have the A.M.P. bonuses added to the policy. They have never missed the few shillings a week that they have invested in this policy.

This man and his wife have had more than protection. They have built up an asset against which they were able to borrow for the building of a home. They have eliminated financial anxiety and can enjoy life to the full.

Ask that an experienced adviser be sent to explain what YOU CAN DO in the way of creating an immediate estate for your own and your wife's old age. If you live far from an A.M.P. office particulars will gladly be sent by post.

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Prolific Old Josephine Pear Trees

Improved Methods of Culture.

THE accompanying picture shows a Josephine Pear tree, promising a heavy crop, on Mr. M. G. O. Basey's orchard at Cherry Gardens, S.A. Owing to improved methods of culture adopted, production has increased more than 100 per cent. in two years. Mr. Basey gives here a short review of his methods.

The trees, which are 30 years old, and are planted 25 x 25 feet apart, which is rather too close (they should be 30 x 30 feet), are growing on a strong alluvial loamy black soil naturally well drained into a nearby creek. The average rainfall is 35 inches.

For some years previously the trees have not carried heavy crops, and it was almost decided on two different occasions, to root them out and replace them with something more profitable. However, they were given another chance, and other methods of culture were adopted.

This past season, from 46 trees, 584 bushels of fruit were harvested, an average of over 12 bushels per tree. The crop was thinned out during the growing period, and as a result, graded out 95 per cent. over 2¼ inches.

For pollination purposes, limbs in each tree have been worked over to either Burre Hardy or Winter Nelis varieties.

A red oil spray was applied in late Winter to induce early flowering and bring the majority of the blooms out at the same time.

A prolific 20-year-old Josephine Pear tree.

Manurial treatment consisted of an application of 6 lbs. of high-grade special manure and 6 lbs. of 4:4:1 per tree. The orchard was ploughed three times and cultivated five times during the Summer. Lime sulphur sprays were used to control Black Spot, and arsenate of lead used for Codlin control, with good results.

Pruning consisted of cutting back to strong, healthy fruit buds and reducing the number of leaf buds, letting in as much light as possible. Strong-growing laterals were removed and the weaker ones retained to develop fruiting spurs.

The crop has increased more than 100 per cent. during the past two years, and this is thought to be due to improved methods of culture.

GRANULATED FERTILISERS.

ONE of the most recent developments in the fertiliser industry has been the manufacture of granulated forms of various types of water soluble artificial fertilisers. The production of such materials is of considerable practical importance, as they possess distinct chemical and physical advantages over the old type of chrystalline or powdered fertilisers.

It is well known that in many soils a good deal of both the phosphoric acid and potash which is applied as fertiliser is rapidly fixed or rendered insoluble, and consequently unavailable to the plant as a result of chemical interaction with other soil constituents.

A recent article in the "American Fertiliser" states that it is well known that only from 10 to 20 per cent. of the phosphoric acid which is applied in the form of fertiliser is recovered in the crop increase produced from its use. The remainder is fixed by the soil in a form only slightly more available than that of the phosphoric acid already in the soil. According to Doctor C. B. Sayre, of the New York State Agriculture Experiment Station, U.S.A., rapid fixation in the soil can be overcome by two methods: (1) by placing the fertiliser in concentrated bands close to the plant, as is normally done when, for example, wheat and superphosphate are sown together through the drill, and (2) by increasing the size of the fertiliser particle, which reduces the surface area exposed to fixation. Dr. Sayre refers to a series of field experiments conducted on Tomatoes with a 4:16:4 fertiliser mixture in which direct comparisons were made between a granulated form of the mixture and the ordinary powdered or finely-divided form. The experiments were replicated three times and in each case the granulated mixture gave higher yields than the ordinary form, irrespective of whether the mixtures were broadcast with a drill or distributed along the rows in two narrow bands on either side of the plant at a depth of about 3 inches.

At present the experimental results for one year only are available, but it is stated that the granulated fertilisers have undoubtedly given promising results and will be used extensively in future experiments. The conversion of the fertiliser into the form of definite pellets or granules effects a very marked improvement in its physical properties and has very definite advantages insofar as its application is concerned. Granulated fertilisers flow much more freely through the drills and can be spread much more evenly than the finely divided forms, which are often difficult to apply satisfactorily by mechanical means.

Uniformity of distribution is known to be a very important factor in getting the best results from artificial fertilisers, and the ganulated fertilisers have a very definite advantage from this point of view.

The advantages of granulated fertilisers have been well recognised for some years by the Nitrate Corporation of Chile, and, as a result, large quantities of a granulated form of Chilean Nitrate of Soda are now produced regularly and marketed in all countries of the world. The granules of this product are snow-white in color, smooth, round and glistening; they are free-running and permit of the most uniform distribution, whether applied mechanically or by hand. Chilean Granulated Nitrate of Soda is a high-grade nitrogenous fertiliser, and its chemical and physical properties render it ideal for use by orchardists and market gar-

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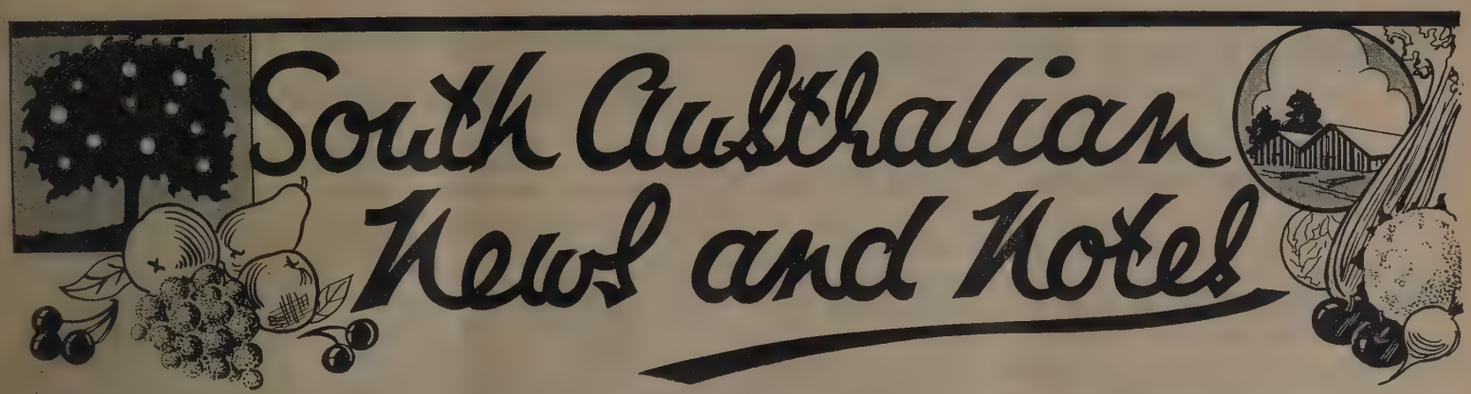
Pat: "Oi dislikes new boots."
Salesman: "Why is that?"
Pat: "'Cause Oi never can git me fate into them till Oi've worn 'em a week or so."



INCLUDING OFFICIAL NOTES AND REPORTS FROM THE SOUTH AUSTRALIAN FRUITGROWERS' & MARKET GARDENERS' ASSOCIATION.

S.A. F. & M.G. Association

Monthly Executive Meeting

THE monthly Executive meeting of the S.A. Fruitgrowers' and Market Gardeners' Association was held on September 24. There were present:—Mr. N. T. Hobbs (in chair), Messrs. F. C. Staniford, R. Hunter, H. B. Robson, F. Hughes, G. H. Schultz, C. H. Ragless, W. H. Ind. A. D. Petersen, T. Playford, M.P., T. Cooke, A. E. Brealey, J. G. Potts, G. H. Sharpe, G. Jennings, G. H. Parsons, C. W. Giles, E. L. Giles, G. L. Pitt, F. A. Wicks, J. Turner, H. A. Wicks, J. B. Randell, C. Ridley, W. J. Bishop, G. Strange, F. B. James, R. A. Crammond, L. J. Wicks, F. G. Gill, W. Turner, A. G. Strickland, and Secretary. Minutes as sent were taken as read and confirmed.

Correspondence: Mr. W. J. Spafford accepting invitation to luncheon and to address the Conference; Messrs. Geo. Quinn, H. J. Finnis, R. Fowler, the Premier, and Wholesale Fruit Merchants, accepting invitation to luncheon and Conference; Wholesale Fruit Merchants re proposed conference re containers; Mr. A. Stevenson and Professor A. E. V. Richardson, expressing inability to be present at Conference; Agricultural Bureau Lenswood and Forest Range Branch, inviting members of Association to a Field Day to be held on Crammond Bros. property, Basket Range, on Friday, October 25, at 1.45 p.m.; Barmera Branch, asking permission to incorporate their body as Fruit Growers and Market Gardeners' Association, Barmera Branch Incorp.; H. T. Dunstone, Barmera, resigning membership; Dept. of Agriculture, enclosing statement showing quantities of fruit in cold storage as at August 31.

Mr. F. Hughes moved, seconded Mr. G. H. Schultz: "That correspondence be received and dealt with." Carried.

Barmera Branch: Mr. C. Giles moved, supported by Mr. C. Ragless, that sanction be granted to incorporate under the name submitted.

Amendment: Mr. L. J. Wicks, moved, supported by Mr. G. H. Schultz: "That sanction be granted provided that their rules are not contrary in any way to ours.

The amendment was carried.

Adelaide Merchants' Conference: Resolved that Mr. N. T. Hobbs, and J. G. Potts, be added to the Committee to meet the Adelaide Merchants re selling of containers with fruit.

Finance: Secretary submitted financial statement.

Annual General Meeting

Friday, September 24th., 1937, at 11.30 p.m.

Present: Mr. N. T. Hobbs (in chair), Messrs. F. C. Staniford, R. Hunter, H. B. Robson, F. Hughes, G. H. Schultz, C. H. Ragless, W. H. Ind, A. D. Petersen, T. Playford, M.P., T. Cooke, A. E. Brealey, J. G. Potts, G. H. Sharpe, G. Jennings, G. H. Parsons, C. W. Giles, E. L. Giles, G. L. Pitt, F. A. Wicks, J. Turner, H. A. Wicks, J. B. Randell, C. Ridley, W. J. Bishop, G. Strange, F. B. James. R. A. Crammond, L. J. Wicks, F. G. Gill, W. Turner, A. G. Strickland, and Secretary.

Minutes of last annual meeting read and confirmed.

The President welcomed Mr. A. G. Strickland (Chief Horticulturist), who had come along to open the meeting. The President stated that the Department of Agriculture were willing at any time to assist the Association, and had been of great assistance to the growers.

Mr. A. G. Strickland thanked the President for his remarks, and stated that it had been a pleasure to the Department and himself to be associated with the Association, and said that he hoped that the same happy relations would continue. He expressed regret at the loss the Association had sustained at the passing of its late Secretary, Mr. W. J. Kimber. It was the desire of the Department at all times to help the Association and the growers. He then declared the meeting open.

President's Report, the 34th of the Association.

The progress made by the Association during the year enables me to present an optimistic report. The increase in membership gives no true indication of the growth of the Association's activities in members' interests. The loyalty and enthusiasm of members generally for co-operative effort is a striking memorial to the untiring labors of the late W. J. Kimber, whose death during the year came as a severe loss to the Association. Secretary for eleven years, and largely responsible for the exceptional growth not only in membership, but in the services rendered the organisation. Mr. Kimber's passing is mourned by every member. No words of mine can adequately express the regard in which he was held or the loss we feel. We have been fortunate, however, in the appointment of a successor. Mr. A. Stuart comes to us with extraordinary qualifications. The work he has accomplished in his short term of office augers well for the future.

The policy adopted by the Association of rendering service to members by means of sections and sectional committees has again functioned very successfully this year. Committee men of the various sections are to be congratulated on the results achieved. Huge quantities of produce have been exported to interstate and overseas markets, the section providing adequate market representation and doing much to lower costs and improve quality and pack of goods.

Inaugurated during the year, the Quarterly Educational meetings are proving a valuable addition to the operation of the Association. Three exceedingly instructive and interesting lectures have been given and all who have attended have agreed that these meetings are well worth while. The board room will conveniently seat large audiences. Our thanks are due to the officers of the Department of Agriculture for much assistance rendered us during the year, our relations with the Department have always been extremely happy. The action of the Woods and Forest Dept. in ensuring a supply of timber for cases and crates have been much appreciated. As in the past, the Executive has carefully watched legislation to see that growers' interests are adequately protected. During the year an interstate Fruitgrowers' Conference was held, delegates attending from all States. Many important matters were discussed and lasting friendships made. A great deal of credit is due to the efficient organising work carried out by the late Secretary.

Society: The section of our work carried out by the Society calls for particular reference. The increase in trading and the results generally achieved by the staff are extremely gratifying. As more members avail themselves of the opportunities presented, so will prices fall and rebates rise. To the staff of the Association I would extend congratulations for the efficient manner in which they have carried out their duties. The gradual lifting of the depression permits me to conclude also on a note of optimism. Growers are confidently anticipating higher returns and better conditions. Much has been accomplished during the year, much more, however, remains to be done I would appeal therefore to members to remain loyal to the principle of co-operation and to support the officers of the Association and so assist this organisation to help each individual grower and so place the gardening and fruitgrowing industry of S.A. on a better footing than ever before.

Financial statement was submitted by the Secretary.

The President moved the adoption of the statement. Seconded by Mr. J. B. Randell and carried.

Election of Officers for 1937-1938.

Mr. W. J. Bishop was elected President; Mr. H. N. Wicks, Vice-President; Mr. S. R. Hosking, Auditor. Executive: Messrs. G. Jennings, L. J. Wicks, W. H. Ind, G. Hunter, J. B. Randell, C. W. Giles, J. Turner, F. Staniford, A. Petersen, G. H. Parsons, N. T. Hobbs.

Mr. W. J. Bishop moved, seconded by Mr. J. Turner: "That Mr. C. H. Ragless be made a life member of the Executive in recognition of years of faithful service." Carried.

Rules: Mr. W. J. Bishop moved: "That the revised rule as submitted by the Sub-Committee be adopted by this meeting." Seconded by Mr. F. Hughes.

Amendment: Mr. L. J. Wicks moved: "That the matter of rules be referred back to each section for consideration during the next month, and at the conclusion of this meeting it be adjourned until October 29, when the rules will be presented for their final adoption. Seconded Mr. T. Playford and carried.

Mr. F. Staniford moved: "That provision be made in the rules for the annual meeting to arrange for life members to the Executive. Seconded Mr. Hughes. Carried.

Sections: Reports were received from the Tomato, Celery, Citrus, Cherry, Potato, Soft Fruits, Apple and Pear, and Almond Sections re their activities and seasonal prospects.

Paint in Tins: Mr. G. Strange brought up the question of the complaint from the County Board re paint in tins for Strawberries, etc., and moved that the Board of Health be asked for details concerning the use of a satisfactory paint. Seconded Mr. Petersen. Carried.

Meeting adjourned until October 29.

Notice

The adjourned general meeting will meet again on Friday morning October 29, 1937, at the conclusion of the Executive meeting timed to start at 10.30 a.m.

Business:

Final consideration of the proposed Revised Rules.

Sections are requested to give consideration to the drafted rules prior to the meeting.

MEMBERS!

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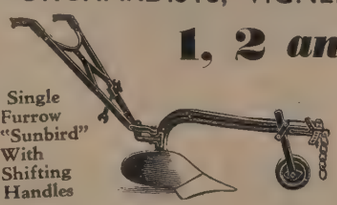
Mouldboard Ploughs

have won the enthusiastic approval of ORCHARDISTS, VIGNERONS and FARMERS

1, 2 *and* 3 Furrow

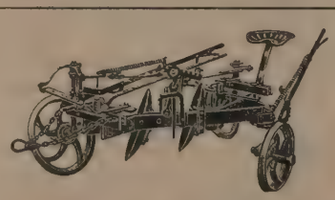


Single Furrow "Sunbird" With Shifting Handles

Showing 2-Furrow "Sunbird"

Sunbird Ploughs are popular for general ploughing in most varieties of soil, and the exceptional amount of clearance coupled with the design of the mouldboard, which turns the sod without packing it, makes them specially suitable for turning in weeds or green manurial crops. They are extremely strong, and have polished mouldboards 19 inches long.
Single-furrow has shifting handles for ploughing close up to trees and vines; or fixed handles if preferred. Furrows 9 inches wide to 6 inches deep. Two and three-furrow sizes also plough close to trees. Light draught; easy to handle.

SUNLEAF Orchard Plough



Levers are down when plough is at work, enables implement to plough under overhanging branches. The two 23in. discs. are adjustable for breast and undercut. Widths of furrow 6½ or 8 inches. Can be converted for single furrow use. Will plough away from vines to within a single furrow width.

Ask your local agent for the Free Leaflets, or write direct.

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Extension piece and depth wheel can be supplied for single disc ploughing "away" in orchards.

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SUNSHINE HARVESTER WORKS
Sunshine, W.20, Victoria.
Also at Sydney, Adelaide, Perth.

The South Australian Fruitgrowers & Market Gardeners Association

Annual Conference

Friday, September 24th., 1937, at 2.30 p.m.

Present: Mr. N. T. Hobbs (chairman), Hon. A. P. Blesing (Minister of Agriculture), Mr. A. G. Strickland (Chief Horticulturist), Mr. B. Flewell-Smith (Manager, Committee of Direction, Brisbane), Mr. A. Stevenson (Chairman Banana Growers' Federation), Messrs. R. Hunter, G. H. Schultz, H. B. Robson, L. J. Wicks G. Quinn, C. W. McRostie, H. L. Cooke, R. Russell, J. G. Potts, Geo. H. Parsons, R. A. Crammond, A. E. Brealey, R. Fowler, G. E. Hawker, J. Turner, M. Vickers, H. N. Wicks, W. Turner, T. Playford, M.P., C. W. Giles, G. Jennings, W. H. Ind, O. C. Esselbach, C. H. Ragless, W. J. Bishop, A. O. Petersen, G. J. Strange, F. G. Gill, F. Hughes, F. B. James, C. Ridley, R. R. Beck and A. Stuart (Secretary).

The chairman welcomed all to the Conference and introduced the Minister of Agriculture (Hon. A. P. Blesing) who had kindly consented to open the Conference.

The Minister thanked the President for his words of welcome and proceeded to address the gathering as follows:—

"The S.A. Fruitgrowers' and Market Gardeners' Association is to be congratulated on having lived and grown since about the beginning of the current century. To-day the Association is one of the strongest and most active co-operative organisations of fruitgrowers in the Commonwealth, and has good reason to be proud of its achievements.

During the year a series of Educational Meetings, held quarterly. were convened by the Association, and have proved popular and very instructive. Interesting and illuminating lectures were given by Messrs. A. G. Strickland, A. G. Edquist, and A. R. Hilton. The Executive are arranging for more such meetings in the future.

I understand that the Association has at the present time a total membership of 700 growers, compared with a membership of approximately 70 growers ten years ago. Recently a Potato Growers' Section has been added to the comprehensive list of sections of the Association, and it is trusted that this section will prosper, and that the members will prosper with it.

In the early part of the season, Irish blight reduced the Potato crop 50 per cent., but the later crop, not so badly affected, was fairly good, yielding four tons to the acre. Prices for the year were very low—as low at £4 per ton, which was below the cost of production. The same area as last year was planted, but due to the heavy yield in Victoria and Tasmania, and the low prices ruling there, the price here was consequently low. The industry generally is perturbed at the adverse conditions existing, and steps are being taken to try and improve the position by having legislation enacted to promote a co-operative action among growers.

As far as vegetables generally are concerned this season, the exportable surplus has been very small, and practically no business in vegetables has been done. Prices on the Adelaide market have been in excess of the previous season. Growers in the past have exported Onions, but as regards Sydney, it was necessary to spray under Hydro-Vacuum process, which so seriously affected the Onions that no business has recently been done. A small quantity has been sent to Western Australia at prices based on Adelaide parity.

To the S.A. Fruitgrowers' and Market Gardeners' Association, much credit is due for the establishment on a firm footing of interstate export trade in various fruits and vegetables; in particular, Celery, Tomatoes, and Cherries may be mentioned.

The Celery season opened badly, being badly affected by black heart, which caused serious waste, and consequently affected sales at the other end.

Due to early rains, the Celery did not have the same keeping qualities as usual, and it was not until the beginning of July that the market improved and sales were satisfactory. Just at this time supplies were fairly light, the reason for this being that much of the Celery planted for that period had grown too rapidly, and sales had been made prior to that time. Since then, prices have held fairly well, and growers who had Celery coming in throughout the season will have a fair average. The Brisbane market was exploited to a greater degree, and a considerably greater quantity was sent there than usual. The total export to Sydney was approximately 8,000 crates lighter, and to Melbourne approximately the same as for the previous year.

Owing to the timber shortage, trouble was experienced in getting sufficient crates, and a deputation waited on the Commissioner for Crown Lands, as a result of which sufficient timber was released, but only after the Association had obtained from members the individual number of crates required per week for the season.

The cost of crates had been considerably increased as compared with previous years.

Tomatoes for Season 1936.

Glasshouse Tomatoes were troubled with disease, leaf mould being added to an already long list of troubles, and although considerably more glass has been erected than the last two seasons, the total export was considerably less. However, due to the reduced quantities, prices were fairly satisfactory.

Cherries.

The Cherry season opened with bright prospects, and promised to be good, but rain caused heavy losses. Several factories were supplied through the Association, and prices received for good quality fruit on the Sydney and Perth markets were satisfactory.

All these products, largely through the efforts of the Association, are commonly given the prefix "South Australian" in many interstate markets. This prefix has been used as a guarantee of superior quality, and it is hoped that in these days of keener competition and more insistent demand for high quality, the prefix "South Australian" will come to mean even more in the future than it has done in the past.

One may go further, and say that for the maintenance and extension of our valuable export trade in various fruits and vegetables, it is essential that the words "South Australian grown" become indicative not of superior quality, but of the highest quality obtainable.

There is no doubt that the Association will do its utmost in this regard, and in their efforts they may count upon the fullest co-operation and assistance of the Department of Agriculture.

S.A.F. & M.G.A. ANNUAL CONFERENCE (Cont'd)

Although motives are sometimes misunderstood, it is a fact that the various activities of the Agricultural Department—even inspectional activities—are all directed towards helping the grower.

Recent activities of the Department which may be mentioned at this juncture include the strengthening last season of instructional facilities for Apple and Pear growers by the provision of two special Instructors to aid in the reworking of unwanted varieties of Apple and Pear trees, and later in the season to provide packing instruction.

Investigational work on various fruit and vegetable problems has been extended in the past year; field experimental plots in connection with control of codlin moth and black spot of the Apple were established in a number of representative districts throughout the State.

An experimental cool chamber for storage experiments with various fruits and vegetables has been established; preliminary steps have been taken in connection with the re-organisation of the Blackwood Experimental Orchard; in co-operation with staff of the Waite Institute, the Horticultural Branch is making substantial progress with the investigation of various pests and diseases, and particular attention is being given to two diseases of outstanding importance—"Leaf Mould" of Tomatoes, and "Gummosis" of Apricots.

In due course, results will accrue from these and other investigations, and we look upon the Association as one of those valuable organisations which facilitate contact with growers and the practical application of results of research work.

Every year competition in the markets for all sorts of fruit and vegetables become keener; the grower of to-day has not only to produce quantity, but also quality, in order to hold his own with new developments. In your Association, I see a body which has progressed tremendously; my desire is to see continued progress, and personally, and through my Department, assist to the fullest possible extent.

Mr. T. Playford, M.P., moved a vote of thanks to the Minister, supported by Mr. W. H. Ind, which was carried with acclamation. Mr. Blesing was then presented with a basket of fruit by the chairman.

Mr. W. J. Spafford (Director of Agriculture) addressed the Conference on "Our Horticultural Competitors." He said: "An industry that wants to go forward must increase, and to keep on making progress we must have a good article, and we have to sell it. To assist in this direction, inspection by the Government must be rigid. The keynote to success in outside markets is quality. Serious contestants for markets in the future may be Chile and Argentine. Chile has a climate similar to South Australia, and as a result produces the same articles as we do. Chile was once a mining country, but has now turned to agriculture. The competition from this country is increasing rapidly, and is now becoming serious.

Africa—The citrus export of Africa is terrific, and the Grape trade big, They cannot, however, compare with our Grapes, which are of a superior quality. The present method of handling in Africa is excellent. We have to be further educated in the production of our own goods, and if our industry is to go forward, serious competition is needed.

Mr. M. Vickers moved a vote of thanks to the speaker, supported by Mr. J. Turner.

Mr. B. Flewell-Smith and Mr. Arthur Stevenson spoke on the affiliation of the S.A. Fruitgrowers' and Market Gardeners' Association, Committee of Direction of Fruit Marketing and Banana Growers' Federation. These three organisations were the three biggest growers' organisations in Australia, and such an affiliation was necessary to safeguard interstate interests.

After discussion on the matter it was carried: "That this meeting agrees with the principles of proposals put forward for the closer co-operation of the Queensland and New South Wales organisations with our own, and instructs Executive officers and sections to confer with the Queensland and New South Wales representatives to put same on a proper footing.

A meeting of the Executive officers, section and interstate representatives held at the conclusion of the Conference unanimously decided on the affiliation.

The Annual Conference Luncheon was held at Foy & Gibson's prior to the Conference on Friday, September 24. Forty-nine gathered around the gaily decorated tables, and a most enjoyable hour was spent by all.

The toast list was as follows:—"The King," proposed by the Chairman; "Parliament," proposed by Mr. W. J. Bishop, response the Premier of S.A. (Hon. R. L. Butler); "The Industry," proposed by the Minister of Agriculture, response Mr. H. N. Wicks; "The Immediate Past President," proposed by Mr. L. J. Wicks, response Mr. N. T. Hobbs.

Invited Guests.

The Premier, Hon. R. L. Butler; Minister of Agriculture (Hon. A. P. Blesing); Mr. A. G. Strickland; Professor A. E. V. Richardson; Messrs. W. J. Spafford, G. Quinn, R. Fowler; the Chairman and Secretary of the Royal Agricultural and Horticultural Society; President and Secretary of the Wholesale Fruit Merchants; President and Secretary of the Fruit Marketing Association; B. Flewell-Smith (Manager of the Committee of Direction of Fruit Marketing, Queensland); Mr. Arthur Stevenson (Chairman of the Banana Marketing Board of N.S.W., and Banana Growers' Federation).

South Australia

Mid-Murray Notes

Irrigation Supplies — Spring Frosts — Non-Irrigated Areas — Sultana Culture — Dis-Budding Currants — Merbein Laboratories Opened — 1,000 Visitors on Field Day — The Gentleman's Agreement.

(By Our Correspondent.)

THE first irrigation of the season commenced on September 8, a much later date than usual, because of the plentiful supply of Winter rains. There is, as a rule, a good deal of general controversy over the date of the first irrigation. In a community irrigation settlement the governing bodies find it necessary to legislate for the requirements of the irrigator whose turn to take the water comes at the end of the roster when fixing a date for this irrigation. The time taken to complete an irrigation varies in each settlement, and is governed by the capacity of the pumps and the capacity of the irrigation channels. The time to complete an irrigation may vary from three to five weeks.

Having this in mind, our irrigation authorities are obliged to anticipate the possible water requirements of vines and trees from the time the irrigation commences until the last man receives the water. At this time of the year, our greatest fears are those of frost danger, and up to the present although we have had several minor frosts, no damage has been reported, but there still lurks the danger, because of the irresponsible nature of the weather. In the past few years our Spring frosts have been severe, and there are large areas already protected by supplies of heating fire pots and quantities of crude oil in readiness for any emergency. Last year's frost experience amply demonstrated that it can be overcome by orchard heating. During early Spring it has been found expedient to allow the land to remain undisturbed by cultivation after the first irrigation, and while the frost danger still exists, as experience has proved that damage is markedly greater where land has been well worked than where left undisturbed. Furthermore, the irrigation now in progress will saturate the land, which will slow down the radiation, and in consequence will minimise the danger of frost damage.

The writer has recently been on a visit to some of the non-irrigated fruit growing areas where the soil is simply oozing moisture from copious rains, and while in these areas the thoughts of an irrigation being in progress at home seemed superfluous. However, on returning home it was found to be quite necessary. The most outstanding difference in cultural practices noted in the non-irrigated fruit growing areas was the almost total absence of leguminous cover crops. Passing through hundreds of acres of vineyard and orchard lands, only one crop of Beans could be seen, the growers in these areas depend upon the natural Winter weed growth for their organic matter, a poor source of supply when compared with the sown legumes. There is a natural conservatism among the holders of these old-established vineyards, where the third generation of the original planters now till the soil, and cultural practices which have been in use for so long are hard to depart from.

Sultana Culture.

On the present showing, Sultanas have burst exceptionally well all through the settlement, the evenness of early development is always indicative of a very satisfactory beginning to a good crop. Unevenness in bud burst is invariably followed by a scattered bunch development, and is generally accompanied by many barren shoots. There are many advocates of removing these barren shoots, acting on the belief that the whole of the energy of the vine is then thrown into the productive shoots.

This theory is not correct, however, as experiments have been carried out on this matter, the results of which indicate that these barren shoots help to create a better development of fruiting buds in the following year. Vines which have been allowed to retain all barren shoots invariably carried a heavier crop in the following year than the vines having all barren shoots removed.

Dis-Budding of Currants.

Dis-budding of Currants at this time of the year is practised by many growers in an endeavour to improve the quality of this particular fruit. We have developed cultural practices which have improved the cropping capabilities of our Currant vines, but this has been accompanied by a certain deterioration in quality and this problem has been attacked by our experimentalists. During the maturation of the fruit it has always been noted that weak shoots coming away from dormant buds on the main stem, or at the base of a spur invariably throw later fruit than on spurs, the fruit of which is lacking in sugar, and consequently is of poor quality.

One line of experiment aims at the removal of all these "come-by-chance" shoots, leaving only the fruiting shoots coming away from spurs left definitely for that purpose. Up to date there has been a definite improvement in the development of

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bunches, by the adoption of dis-budding Currants. Fruit has ripened more evenly, and promised to produce fruit of excellent quality, but unfortunately in the past two seasons (during which time the trial has been in progress) we have experienced heavy January rains, causing greater damage to the dis-budded vines than to those not so treated. However, with a return of more normal seasonal weather there may be a different tale to tell, as this experiment is still being carried on.

Opening of New Laboratories.

It was the writer's privilege to attend the opening ceremony of the new laboratories of the Merbein Experimental Station on September 21. Dr. A. E. V. Richardson (Director of the Waite Institute and executive officer of the C.S.I.R.), presided over the gathering, and welcomed representatives of every irrigation area from the Murrumbidgee to the lower Murray.

In outlining the history of the Institution, Dr. Richardson said that the growers themselves first felt the need for scientific research, and formed a committee for that purpose in 1912. Funds were raised by means of a levy, and this committee became affiliated with the Mildura Vineyards Protection Board, the work being taken over on the establishment of the Merebein Research Station in 1926. The essence of the Federal spirit is built upon co-operation. The co-operation in a practical manner between the C.S.I.R. and the Dried Fruit Control Board, State Rivers and Water Commission and Packers' Association made the present range of experiments possible, without which the present position would never have reached its full usefulness. Senator McLachlan was called upon by Dr. Richardson to declare the Laboratories opened.

The Senator appreciated the usefulness of the Laboratories in assisting to solve the problems of the fruit grower under irrigation conditions, which came up from time to time, such as the Black Spot visitation of 1905 and 1917, such problems and control of the Dried Fruit Moth. In finding a solution for this latter problem the scientist had saved the dried fruits industry an incalculable amount of money. All branches of industry, both primary and secondary, were closely bound up with science, and in making a substantial contribution towards this end, the dried fruits industry had been a model to other industries. Australia's dried fruits had to compete with the Mediterranean countries and the U.S.A., and in doing so had found the need for producing a light-colored Sultana.

This had been done by the work of the Merbein Research Station in evolving the mixed dip which alone was worth £30,000 to the industry in obtaining a higher price for the lighter colored fruit. In studying the scientific application of irrigation water growth and rooting system of the vine, salt problem, bud development, processing of dried fruits, etc., this institution was a very valued one. When, in 1912, Mr. A. V. Lyon came to Mildura, attached to the newly-opened High School, he felt the need for a more intensive study of insect pests and diseases of the vine, and when a research station was established in 1926, Mr. Lyon was placed in charge, and is still in charge of the present institution.

The senator traversed the development of irrigation in Australia, and paid a high tribute to the work of the Chaffey Bros. in their breadth of vision in allocating lands for experimental purposes, and in closing his remarks, he hoped that the future of the Research Laboratories would prove even more useful than they had been in the past. He then cut the silk ribbon and declared the building opened.

Mr. H. McClelland, M.H.R., moved a vote of thanks to Senator McLachlan. In seconding the motion, Mr. E. G. Dawson spoke on behalf of the Shire Council. Mr. H. D. Howie spoke on behalf of the Dried Fruits Export Control Board, and Mr. D. C. Winterbottom on behalf of the Advisory Committee of the Merbein Research Station.

Annual Field Day.

On the day following the opening of the Laboratories (September 22), a field day was held and attended by growers from all parts of the River. Nearly one thousand visitors were interested enough in the work to attend this monster gathering, which was formally addressed by Messrs. O. C. Winterbottom (Chairman), H. McClelland, M.H.R. Senator Brennan, Senator Leckie, Senator Plain, Dr. Dickson (Chief of Division of Plant Industry), Professor Prescott (Chief of Soil Division of C.S.I.R.), J. E. Thomas, B.Ag.Sc., B.Sc., B.V.Sc., and A. V. Lyon, M.Ag.Sc., and Mr. Rawlings and Mr. Creton.

When the Chairman announced that Mrs. W. B. Chaffey, widow of the late W. B. Chaffey (one of the brothers who started the settlement) was in attendance among the visitors, the news was received with thunderous applause.

At the conclusion of the addresses, the visitors moved to six focal points, where officers of the Research Station explained the work in hand and answered questions on any point of interest. The Laboratory was in charge of Mr. D. Walters, B.Sc. Soil problems and drainage matters were in charge of Mr. S. Tisdall, M.Ag.Sc., and Mr. Hooper, B.Ag.Sc. Dried fruit processing and samples were explained by Mr. Orton, B.Sc. whilst the salt field was in charge of Mr. J. E. Thomas, B.Sc.

Mr. A. Ingerson interested growers in soakage problems of irrigation water, while Mr. J. Giles had charge of the pasture plots. The whole arrangements were exceptionally well organised, and those in charge of the various sections of interest were kept busy answering a bombardment of questions from growers thirsting for knowledge. This is the largest and most successful annual field day ever held at the Merbein Research Station.

Visit to N.S.W. Side.

Through the courtesy of Messrs. Watson and Yule, of the N.S.W. Water Conservation and Irrigation Commission, a short visit was made to the N.S.W. irrigation settlements on the other side of the River at Curlwaa and Coomealla. Curlwaa, as a settlement, is singularly fortunate in so far as drainage is concerned. The settlement site comprises a typical delta country with a good depth of rich alluvial soil possessing a natural drainage into a coarse sand, which once must have been the course of the River itself. Passing on to Coomealla we find a totally different type of soil, and more typical of the Belar Hinterland, reminiscent of the Red Cliffs area and, like Red Cliffs, produces some heavy crops of vine fruits. Coomealla has about 2,800 acres of irrigated land of which 2,500 comprises vines (mostly Sultanas), and about 300 acres of citrus and other tree varieties.

After the settlement had been in existence for about five or six years it was evident that some form of drainage was necessary, and a comprehensive scheme is now in pro-

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gress to prevent more land from becoming useless.

Before the drainage scheme came into force a considerable amount of land went out of cultivation, and to counteract this, a tract of new country about 400 acres in extent has been opened up, and is now in its second year. This extension was sanctioned by the various States interested in the observance of the Gentleman's Agreement embodying a resolution not to further extend the planting of vines for dried fruits. Coomealla extension has been supplied with a drainage scheme from the outset, and should become a model of efficiency. With an assured success of this new area, there is, however, a danger in some quarters of a general advocacy of unlimited expansion, quite irrespective of the marketing possibilities of such a policy, and this is a move which must be carefully watched. Other countries, including our own, have suffered from the effects of unlimited expansion in primary products without taking due regard to the economic aspect, and we must therefore not allow a short-sighted policy to seriously affect an established primary industry.

"NEMO."

Setting of Fruit

How to Ensure Good Crops.

IN an address to the S.A. Fruitgrowers' and Market Gardeners' Society recently, Mr. A. G. Strickland, Chief Horticultural Instructor, stated that the loss of water by a normal fruit tree on a clear hot day was very large. It had been proved that 500 lb. of water was lost by an average Apple tree under such conditions.

Mr. Strickland added that there were many cultural factors influencing the setting of fruit, and many of these were under the control of the grower. There were many growers who were not securing the maximum amount of fruit from the blossoms on their trees. For a really good crop of Apples, it was only necessary for about one in every 20 blossoms to set. With certain other varieties of fruit, this percentage was much lower, a setting of one in three being necessary for some varieties.

"If there is any shortage of water or foodstuffs, it is the blooms and young fruit that suffer, and not the shoot growth," said Mr. Strickland. "Pruning limits the amount of leaf on the tree and permits the flowers and young fruit to obtain the necessary moisture at a critical period of growth. There are two main foodstuffs required by developing fruit—nitrogen and carbohydrates. Nitrogen has a very marked effect upon setting, and in many cases sulphate of ammonia should be applied before blossoming, in order to supply the trees with available nitrogen."

He stated that the ploughing in of weeds three or four weeks before bud burst also provided a supply of nitrogen to the tree. Carbohydrates were stored by the tree from season to season, and for this reason it was important to maintain a healthy leaf surface throughout the Summer period. It was a great mistake for vine growers, for instance, to turn their stock into their vineyards as soon as the fruit was picked.

South Australian State Conference

RESOLUTIONS TO FEDERAL COUNCIL

Frost Relief—Restricting Plantings.

THE 14th annual S.A. Conference of the Australian Dried Fruits Association was held at Barmera on September 3, when much important business was done. Mr. H. D. Howie, chairman of the Renmark branch was elected conference chairman and there were present the following delegates:—Messrs. E. D. Sims, C. W. Till, W. MacGillivray, L. V. White (Barmera); R. Curren, A. P. Wishart, A. C. Ingerson, H. H. Stone (Berri); W. R. Jorgensen, E. L. C. Hodge (Cadell); S. Peterson, E. Chaston (Kingston); E. A. Liddicoat, G. Scott (Moorook); H. D. Howie, C. S. Ruston, E. N. Seary, O. Weste, H. C. Carne, E. L. G. Whillas (Renmark); J. J. Odgers, J. B. Murdoch, J. R. Jemison, C. B. Williams (Waikerie); A. C. Fricker (Pyap); J. A. Craig and A. J. Chapman (Angaston); J. Victorsen and A. H. Rogers (Clare); R. A. Haynes and A. W. Kelly (S.A. Prune Association); A. H. Fraser and F. R. Bruce (McLean Flat); representatives and visitors, A. H. Fraser and F. R. Bruce (McLarenchie (Cole and Woodhouse); H. R. Jones (Co-operative Dried Fruit Sales); H. Newton (G. Wood and Sons); R. Shepley (Clare); E. Simes (Barmera); F. McGlasson (Berri); T. B. Rake (McLaren Flat); G. L. Wishart (Angaston); G. Ahrens (Angaston).

Frost Relief.

This question was raised by Mr. Rushton (Renmark), who stated that his district had received little or no relief from the Frost Relief payment in the past ten years and he moved, seconded by Mr. Weste and carried: "That the State Government of South Australia be approached with a view to appointing a hardships board to deal with the present position of the Frost Relief Act."

Marketing and Future Arrangements.

On behalf of the Adelaide agents, Mr. Newton (G. Wood & Son) asked Mr. Howie, as chairman of the Board of managament of the A.D.F.A., for a review of the prospects of the 1938 marketing arrangements.

Mr. Howie replied at length and advised the delegates that the strength of the 1937 voluntary agreement would be tested very shortly, and in that would lie the future of the 1938 prospects. He advised that he would not be prepared to divulge what that was, but hoped for a full report for the October Federal Council meeting. He added that there were 80 signatories to the voluntary agreement for 1937, and he saw no reason why the arrangements now being controlled by the A.D.F.A. should not work satisfactorily.

Mr. Jones (Co-operated Dried Fruit Sales), in a very impressive review of the position, said that in his opinion the majority of the signatories were agreeable to the arrangements made by the chairman for the 1937 harvest. The position was considerably clarified and all being well the 1938 harvest should mark the turning point of the industry.

Home Consumption Price.

Mr. Victorsen brought up the question of home consumption price, and said that he knew of a case where the person concerned was selling Currants at 5¾d. per lb., which was below the price fixed.

On the motion by Mr. Sims, seconded by Mr. Till, it was resolved: "That this meeting of growers' delegates express appreciation of the effects of the 1937 voluntary agreement, which had enabled the maintenance of prices in the Commonwealth and further urges the Association to endeavor to negotiate an extension of the agreement for 1938 as, failing such an agreement, prices in Australia would soon fall to export parity."

Price War.

After a lengthy discussion which showed a great diversity of opinion, a motion: "That it be a recommendation to the Federal Council that our agents be empowered to buy Currants in non-irrigated areas in South Australia," was withdrawn.

"Dried Fruits News."

Mr. Till asked the chairman on a report as to why the "Dried Fruits News" was not published monthly instead of bi-monthly, as passed by the State and Federal boards?

Mr. Howie reported that owing to the heavy expenditure during the referendum campaign, and the difficulty in obtaining substantial material from the local branches the board of management had deemed it advisable to make it a bi-monthly publication and thus cut down considerable expense.

Opening of New Areas.

The question of opening of new areas was introduced by Mr. Ruston. Mr. Till advised that he had learned that some 3,000 acres was planted in 1936, and he was of opinion that the planting of new areas should be prohibited.

Mr. Weste (Renmark) read a paragraph dealing with this aspect of the situation, which stated that there was a gentlemen's agreement restraining the planting of new areas; but just how long that gentleman's agreement was going to last or how long it was going to be publicly violated, he was not sure.

Mr. Murdoch moved, and Mr. Sims seconded: "That the Federal Council be asked to continue its efforts in its

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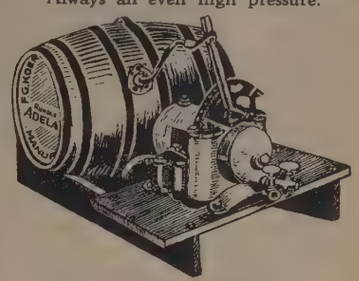

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restriction of planting in new areas of vines until further markets were available."—Carried.

Classification of Tree Fruit Grades.

Mr. Ruston said that the classification of dried fruit grades had shown a tendency to deteriorate from the original classification.

Mr. Seary said that it mainly dealt with Apricots, and especially as it was in South Australia, where the bulk of the Apricots were grown.

Mr. Jones said that from a marketing point of view, the grading was well done, and Mr. Chapman said that a fresh system of grading was absolutely necessary.

On the motion of Mr. Ruston, seconded by Mr. Sims, it was resolved: "That a committee be formed at the Federal Council meeting to interview the Department of Commerce in regard to the reclassification of tree fruit grades."

Uniform Account Sales.

Mr. Sims said that it would be a great advantage to all concerned in the Upper Murray Districts if each A.D.F.A. packer could render his accounts sales on a sweat box basis. At the last State Conference held at Clare in 1936, it was agreed to refer the matter to the A.D.F.A. Board of Management to see if such a scheme was possible.

Mr. Jones replied that they had conformed with the request, but Mr. Newton said that he had been endeavoring to do so, but found that it was practically impossible to obtain each packer's shrinkages, etc.

Mr. Sims moved and Mr. Curren seconded: "That it be a recommendation from this State Conference to the Board of Management that they continue to endeavor to have all account sales rendered on a sweat box basis, if necessary taking into account circumstances prevailing in the different districts."—Carried.

An addendum was carried (Fricker-Chaston): "That sweat boxes shall read "uniform."

Show Exhibits.

Mr. Rogers brought up the question of Royal Show exhibits. He was very distressed at the little interest that was being taken in the Dried Fruits section. He read a letter from the Secretary of the Agricultural Show Society in which it was advised that every assistance would be given growers and packers who would exhibit. In his opinion the growers were very apathetic about the Royal Show and something should be done to increase the number of exhibits.

The chairman replied that the Shows fell at rather an awkward time for the dried fruits industry and growers did not keep supplies on hand for exhibits.

On a motion it was agreed that a recommendation be made to the Federal Council to secure an increase in the number of exhibits at the various Royal Shows.

Currant Position.

Mr. Murdoch said that he felt that the position regarding Currants was more or less a matter for the non-irrigated areas. Sultanas had a very much bigger clientéle than Currants.

After discussing the situation it was decided: "That the question of the Currant position be submitted at the Federal Council meeting in October."

Delegates to Federal Council.

The following delegates were elected to Federal Council: Messrs. Scott, Curren, Sims, Jemison, Fraser, Victorsen and Euston.

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W.A. Fruit Growers

Annual Meeting.

THE annual meeting of the Mt. Barker Fruitgrowers' Association was held on August 20, when Mr. J. McN. Martin presided over an attendance of 40 delegates. Amongst the items to be forwarded for the annual conference were:

To ask the Executive to bring forward and discuss the matter of super works at Albany.

That the saw millers be asked whether their experience in cutting seasoned side boards is such as would permit of tops and bottoms being accurately cut to thickness without dressing, and if so what economy would be achieved by this.

That the Executive bring forward and discuss the matter of bulk oil bunkering facilities in Albany.

That a proposal from the W.A. Fruit Shippers' Committee be supported in respect to the export regulations that they should state specifically the cases being sufficiently filled and that the fruit must not be in an over mature condition instead of the regulations as they are at present.

The list of Apples and Pears for export was reviewed and the meeting gave their views upon varieties considered should be allowed to be exported.

The following officers were appointed:—

President, Mr. J. McN. Martin, re-elected; Vice-President, Mr. T. G. Sounness, re-elected; Committee, same as last year with Mr. G. Enright to take the place of the late Mr. E. Thomas, Messrs. W. Frost and H. C. McClure to represent Kendenup; Treasurer, Mr. J. H. Bremner, re-elected; Secretary, Mr. B. Hickling, re-elected; Auditor, Mr. A. C. Hickling, re-elected.

IRRIGATION AND ROOTS.

An examination of the location of the fruit tree roots has shown that in orchards where the irrigation furrows are not more than 30 inches apart, the roots of the trees are most evenly distributed through the soil. When the irrigation furrows are 4 feet apart or at greater distances, the fruit tree roots are found in greatest numbers within one foot of the edge of the irrigation furrow.

Where the furrows are spaced 6 feet apart, a cubic foot of soil next to the irrigation furrow will contain from two to 10 times as many roots as a cubic foot of soil 3 feet or more from the edge of the irrigation furrow. In some orchards examined, almost no fibrous tree roots were found more than 2 feet from the edge of the irrigation furrows, but in a cubic foot of soil by the edge of the irrigation furrow, as many as 250 linear feet of fibrous roots were found.

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Correspondence Invited.

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DRIED FRUITS NEWS AND NOTES

The Drying of Sultanas

THE QUESTION OF THE DIP

Department's Recommendations.

FREAK dips and modifications from standard dips should be discarded by growers. Although there is a large number of dips used, they are all derived from the three main or basic dips; namely, the mixed dip, the cold dip and the boiling caustic dip. After thorough testing, the N.S.W. Department states that these give the most satisfactory results.

The following article is by Mr. W. McCutcheon, H.D.A., Fruit Inspector, of Curlwaa, and is printed by courtesy of the "Agricultural Gazette," N.S.W.

Good Points of Recommended Dips.

We have in the mixed dip one which combines practicaly all the merits of a hot dip with most of the good points of the cold dip. The mixed dip is suitable for use in all areas where Sultana Grapes are grown and is recommended to the grower by the Australian Dried Fruits Association as a standard dip.

The cold dip will, under sutiable conditions, produce the highest quality dried fruit, but its use is recommended only in the hotter and drier areas of the State, and it is an essential that adequate rack space should be provided if this dip is to be used. In the Coomealla area over 95 per cent. of the Sultanas dried in the 1935 season were processed in the cold dip, but at Goodnight and Koraleigh this dip is seldom used. The conditions prevailing on the Murrumbidgee Irrigation Area are unfavorable both as regards weather and rack space.

The boiling caustic dip is used where injury to the fruit has resulted before harvest, and with damaged fruit will often produce a more even sample than will any other dip. The fruit treated by this dip is of a darker color, being a fairly dark-brown and it is very susceptible to further darkening if wetted during the drying period. The strength at which this dip is used for Sultanas is usually 2 lb. caustic soda to 50 gallons water, and the temperature at which it is used 212 deg. Fahr. (boiling point).

The Cold Dip.

The cold dip is made as follows:—

Water—100 gallons.
Carbonate of potash—56 lb.
Olive oil—3 pints.

This mixture will give a Baumé reading of approximately 6 deg. The fruit is immersed for two to four minutes. Should the wax bloom of the fruit not be almost entirely removed at the expiration of this period, a little more oil should be added, a quarter of a pint at a time, until the bloom has almost disappeared.

When the fruit and the dip mixture are both cold, as is the case when dipping is commenced in the morning, rather more oil than stated above may be necessary, but as the fruit and the dip mixture become warmer, as the day temperature reaches its maximum, the dip will achieve the same result, although actually containing rather less oil.

Additions of oil must be made when the bloom is not sufficiently removed, but for a number of reasons it is not possible to state definitely the quantity of oil that must be added in accordance with the amount of fruit dipped.

The Mixed Dip.

The mixed dip contains the following ingredients:—

Water—50 gallons.
Carbonate of potash—2 lb.
Olive Oil—1½ pints.
Caustic soda—2 lb.

It is used at a mean temperature of 180 deg. Fahr., with a variation of 3 deg. each way during a dipping, ranging from 183 deg. at commencement of dipping to 177 deg. at the conclusion. Variation beyond these limits very often will cause marked fluctuation in the amount of cracking of the fruit and therefore in the drying rate, and it must be borne in mind that fruit which has not been cracked in the dip is exactly on the same footing as cold dip fruit, and will dry no quicker than the latter. Again, a variation in the temperature has a definite effect on the color of the dried sample.

Immersion in the Dip.

This is a factor which is subject to much debate, but a rather slower dipping than is often given is advantageous. Sufficient time in the dip should be allowed for the mixture to reach the fruit in the centre of the buckets. Moving of the buckets of fruit along the dip towards the draining table will somewhat assist the mixture to penetrate the mass of fruit.

The general practice is to have the draining table sloping toward the dip tank, but there does not appear to be any sound reason for this arrangement as every advantage lies with the table sloping away from the tank, in that the debris which is shaken out runs away from the dip tank and can be removed from the collecting tank before returning the liquid to the dip tank. Again, during a dipping run the mixture running back down the table becomes very much cooler and lowers the temperature of the dip rather more quickly than should be the case, thus causing a shorter run. Furthermore, when the table slopes upward it calls for a harder throw on to the draining board, causing some slight injury to the fruit, apart from the additional exertion imposed upon the operator.

Spreading Fruit on Rack.

As soon as the fruit has drained reasonably well it should be spread on the rack and the spreading should not be too heavy; on a 10 feet bay with 4 feet netting twelve dip tins of fruits (each holding 15 to 16 lb.) will be ample.

Spreading trays are a decided advantage as regards speed and amount of damage during spreading. They also result in a greater degree of evenness and less loose berries. A little patience and endeavour to learn the art of tray spreading at the outset will be well repaid in even a single day's work later in the season.

Shading the Fruit.

As the filling of the rack progresses the fruit should be shaded if the weather is hot. Shading on the eastern side is essential only during the period of a heat wave, but the western side should be protected either by hessian or a verandah in all normally hot weather.

Properly constructed rack verandahs are most convenient and effective, as they can be set to permit a free passage of air and yet at the same time provide protection from sun or rain.

As the fruit dries, one or more sprayings may be necessary to hasten the drying by renewing the oil film on the surface of the fruit. The first spray should usually be applied four to seven days after dipping. The spray mixture is the standard cold dip mixture quoted earlier and it should be applied in a fine misty spray to moisten the whole surface of the fruit.

Removal from the Rack.

The fruit should remain on the rack until almost quite dry, when it is shaken down on to hessian and spread in the sun for bleaching. By bleaching is meant the complete removal of the green tinge and an evening up of the brown shades to an even light golden brown or amber color.

To assist in drying out and to hasten bleaching, waterproof material such as is used for lining roofs, etc., is of value, because it resists the tendency of the fruit to draw moisture from the soil, and, furthermore, has the very desirable quality of absorbing heat from the sun's rays. It will greatly facilitate handling of the fruit if hessian is spread over this material.

If the fruit, when removed from the rack, shows a marked green color, a spraying with water will assist in the removal of the green pigments.

Washing the fruit may in some cases be necessary to remove dust, and is also an excellent aid to bleaching out the green color, which is removed more quickly if the wet fruit is left in a heap for a few minutes. Washing should be done early in the day, not later than 10 o'clock.

S.A. DRIED FRUITS BOARD.

Meeting of S.A. Dried Fruits Board was held on August 30, 1937, when all members and the Secretary were present.

Correspondence in regard to Alternative Marketing Proposals was laid on the table and noted.

Minutes of meeting of the Equalisation Committee held in Adelaide on August 23, 1937, were read.

Chairman reported the meeting had been adjourned to September 8, 1937.

It was agreed to make a donation of £3/3/- to one of the local Frost Committees in the Irrigated Areas for the purpose of securing an alarm thermometer.

The position of dealers in relation to the State quotas for 1936 was again considered, and the Secretary was directed to confer with the Crown Solicitor.

A letter was received from the Victorian Dried Fruits Board requesting the Board to reconsider the position in regard to the syrup content of Prunes in syrup, and it was agreed to refer the matter back to the Consultative Committee, which would be held at an early date.

Financial and routine business was transacted.

SALES IN GREAT BRITAIN.

The Commonwealth Dried Fruits Export Control Board report that sales in Great Britain recorded with the London Agency of the Board during the week ending September 16 amounted to 1,580 tons. An average price of £49/6/2 was realised on 319 tons of Sultanas; 595 tons of Currants were sold at an average of £30/19/- and 166 tons of Lexias at an average of £46/8/10 per ton.

Seasonal demand is evident and the higher prices are due to the limited supplies now remaining unsold which are as follows:—Sultanas 1,930 tons, Currants 3,658 tons, and Lexias 233 tons. Of these unsold quantities approximately 1,000 tons are in transit to Great Britain. It is expected that a large parcel of the balance of Sultanas and Lexias will be cleared during the coming fortnight, while steady progress is being registered in the disposal of the present season's shipments of Currants which amounted to approximately 9,600 tons. In no former year has the realisation of the harvest been so far advanced as during the current campaign.

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THE MARKET GROWER

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The Lucerne Flea and Potatoes

NEW SOUTH WALES EMBARGO QUESTIONED

IN a report of a meeting of Potato growers held at Warrnambool on September 16, appearing in "The Age," it was urged that the State Government test the legality of the embargo placed on produce from western Victoria by the N.S.W. Government because of the prevalence of Lucerne Flea. The meeting was arranged by the Chamber of Commerce.

Mr. W. Kiely, of Illowa, referred to the loss that had been sustained by district farmers in the last seven years during which the embargo had been in operation. Before the imposition of the prohibition, large quantities of Potatoes and Onions were shipped direct from the district to Sydney, with the result that better prices were obtained. He contended that the conditions were the same as those existing between Victoria and Tasmania when Victoria imposed an embargo on Tasmanian Potatoes, which was declared by the High Court to be unconstitutional. The position was that N.S.W. refused to accept produce unconstitutionally, and if this district could forward Potatoes and Onions free from disease, the Lucerne Flea included, then New South Wales was violating section 92 by refusing to admit them. The growers were quite prepared to submit to the inspection laws of N.S.W. If the Government would decide to bring this matter before the High Court, then the embargo which had penalised a large part of western Victoria for seven years would soon be numbered amongst the things of the past.

Mr. Kiely moved that Mr. Bailey and Mr. Bond, M'sL.A., be asked to urge the State Government to test the validity of the action of New South Wales in the High Court.

Mr. Bond, M.L.A., said it would be the duty of the Government to first make a thorough investigation of the legal position. He felt sure that if the position was as stated, no Government would refuse to have the matter tested in the courts.

Mr. Bailey, M.L.A., pointed out that the case of Tasmania was different from New South Wales in that in the case of Victoria and Tasmania there was a total prohibition against the importation. In the case of New South Wales there was no prohibition against the State of Victoria, but a regulation made by the New South Wales Government provided that Potatoes should not be allowed to enter New South Wales unless accompanied by a certificate by a Victorian inspector that the Potatoes were not grown in an area infested with Lucerne Flea. He would submit the resolution to the Government, and they could rest assured that if the Crown Law Department advised that there was a case it would be taken to the courts.

The resolution was unanimously agreed to.

POTATO BOARD

Poll Closed on October 5.

The application of the Marketing of Primary Products Act to Potatoes is to be decided, as in the case of other primary products, by the vote of producers. All growers of 2 acres or more in the 1936-37 season were eligible to claim a vote, and approximately 5,000 availed themselves of the opportunity by registering with the State Electoral Officer up to September 7, when the time for claiming a vote expired.

Voting was by postal ballot, and was compulsory for all who had enrolled as growers qualified to vote.

At the time of going to press, the result of the poll was not available, but in the event of growers voting for a Potato Board a further poll will be taken to determine the personnel of the Board and the State will probably be divided into zones representing the growing areas from which producer-members will be appointed.

Details of the poll will be given in our next issue, and any further announcements necessary regarding this matter.

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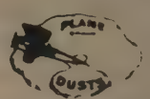
CHARITY IN ACTION.

GISBORNE.—Several weeks ago Mr. R. Flaire, Potato grower, of Bullengarook, near Gisborne, was taken to hospital suffering a severe illness, from which he has not yet recovered.

A working bee got busy for two days, dug Mr. Flaire's large Potato crop, bagged it, and carted the bags from the field.

Mr. Flaire has a large and young family.



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What the Producer Gets

NEW SOUTH WALES OFFICIAL FIGURES

The State Marketing Bureau, Sydney, has prepared a graph showing the spread between what the consumer pays for Beans and Peas and what proportion of that price gets back to the producer. The study covers a full year ending with May 31 of this year, and can be taken as approximating a similar study in most States.

At the average retail price paid by the consumer, Beans 9/2 per bushel and Peas 9/11 per bushel, the costs and net returns show:—

	Beans.		Peas.
Average retail price paid by consumer	9/2		9/11
Average wholesale price paid by retailer	6/5		6/9
Retailers' expenses and profit	2/9		3/2
Marketing Costs—			
Cartage 2½d.		3d.	
Rail freight 3d.		4d.	
Selling Commission (7½%) 6d.	11½d.	6d.	1/1
Net return to Producer	5/5½		5/8

BACTERIAL BLIGHT OF BEANS

THE Halo Blight, as it is called, because of the halo that appears to surround the centre of the bacterial core, has caused severe losses in Australia in the past, and it is only now that any appreciable success is being reported in securing resistant seed. Early Spring crops seem to suffer more than those planted later in the year, says the "N.S.W. Agricultural Gazette."

Since contaminated seed is the most important source of infection, it is essential that only high-grade seed from clean crops be used for planting. The Department has fostered the development in inland areas of reliable seed, and probably within a few years all the seed requirements for the French Bean crops in this State will be produced locally.

Detection of Infected Seed Difficult.

In the case of severe attack, the seed may be shrivelled, but when pod-infection is slight, injury is often not apparent. It is thus difficult to recognise infected seed after removal from the pods. Seed treatment is not recommended, and there are no immune commercial varieties; hence the importance of using only seed from clean crops.

Roguing Important.

The need for frequent inspection of the young Bean stands cannot be stressed too strongly. The plants should be closely examined soon after they appear above ground, and any seedlings that have germinated poorly, shown brown or cankered areas on the seed leaves (cotyledons) or the characteristic blight spots on the first leaves, should be immediately removed and burned.

This practice of "roguing" or removing visibly infected plants is extremely important if spread of the bacterial germs to other plants is to be prevented. The crop should be carefully inspected every week up till flowering time, with the object of removing all diseased plants. Frequent inspections just following rainy weather (when the disease will progress) are very essential, but working among affected plants when they are wet should be avoided, as the disease will be spread in this way.

Unless the percentage of affected seedlings observed during the early inspections is low, roguing is not likely to be of value.

THE BROWN VEGETABLE WEEVIL

Dusting and Spraying.

Vegetable growers are reminded that adults of the brown Vegetable Weevil are now becoming abundant, and may cause considerable losses unless control measures are undertaken. These weevils feed at night and during the day hide in the soil or in rubbish near the base of the plants.

The pest may be controlled by dusting with a 20 per cent. lead arsenate or calcium arsenate dust, using either hydrated lime or kaolin as a filler. A spray of arsenate of lead powder 1 lb. and 30 gallons of water is also effective.

Where young plants are attacked a useful method is to dip the tops of Cape weed, Potato, or other easily obtainable food plants in lead arsenate or calcium arsenate mixture, or to dust them with the diluted powder after dipping them in water, the treated plants being placed between the rows of the infested crop towards evening.

CITRUS NOTES

Arab and Jew

Palestine's Citrus Industry.

THE presentation of the report of the Commission which recently studied the racial position in Palestine and their recommendation that the country be partitioned and that an Arab area representing approximately two-thirds of the country with a Jewish area approximating one-third, brings forth a reaction of jealousy from the Arabs who state that the Jews are to be given the best and most productive areas.

Whilst that statement may now be comparatively correct, it must be remembered that Jewsh penetration has been largely responsible for the improvement in production in Palestine, especially relating to the extensive development that has taken place in the Citrus industry. The Arab is proverbially a lazy race and has for centuries been satisfied to eke out a sort of living in the easiest manner possible, namely by grazing herds, whereas the Jewish orchardists have reclaimed the desert places and, with the aid of irrigation, have made the production of increasing quantities of citrus fruits possible.

Moreover, most of them have come from Germany and United States, where they found that to be successful producers in any commodity, brains and finance had both to be harvested, and nature supplemented by hard work and technical knowledge. That, in a few years, they have created a new and highly organised industry is to their credit, but they have also organised the selling of their produce to such an extent that Palestine citrus fruits are now displacing those of older producing countries, and are actually opening up new markets.

Within the last two years, the export of citrus fruits from Palestine have increased 100 per cent., as the following table shows (in cases):—

	1935-36.	1936-37.
Oranges . . .	5,155,000	9,306,800
Grapefruit . .	682,000	1,406,100
Lemons . . .	38,000	58,600
Other Citrus .	500	2,800
	5,875,500	10,774,300

Palestine's export season extends from September (Grapefruit only) to April, the peak month being January. The largest proportion goes to Great Britain, which last year took 7,719,667 cases. Of Continental countries, Holland (607,607), Germany (318,273), Sweden (311,250), and Poland (307,791), provide the largest markets. India and the Far East increased their purchases by 50 per cent. to 12,702 cases, Egypt and the Sudan almost doubled their reception to 11,765 cases, whilst Canada, which took 21,820 cases in 1935-36, reduced her imports to 4,271 cases.

Price returns for 1936-37 were much below those of the previous year, due, it is stated, to the larger quantities shipped and the wasty condition upon arrival, in fact, the lower grades just broke even with packing and shipping and marketing expenses, and gave little returns to the producers. The prices actually realised represented a reduction of from 1/6 to 1/9 per case for Oranges and 2/3 per case for Grapefruit.

Although the crop in this past season created a record, the net profits to growers was less than the previous year, when only half the quantity was harvested. This was the second consecutive poor season experienced in Palestine.

COLORING OF LEMONS BY ETHYLENE GAS.

Provided that the juice content is well developed, the use of ethylene gas may be resorted to for hastening the yellowing of green-colored Lemons. The exhaust gas from an oil engine may also be used with success, but care must be taken that carbon deposit is avoided, says the N.S.W. Agricultural Notes.

The usual practice is to admit the gas to the fruit while stored in lug boxes covered by a heavy canvas, or in an air-tight room. The temperature should be not lower than 65 deg. Fah., and not higher than about 80 deg., with a relative humidity of 80 to 85 per cent.—damping the floor or placing a dish of water inside the enclosure will maintain the humidity near this mark. The gas is admitted every twelve hours at the rate of one cubic foot to every 1,000 cubic feet of enclosed space. A few minutes' ventilation just prior to admitting the gas every day is advisable with an air-tight room. Coloring is usually complete in from three to five days.

Lemons colored with ethylene often decay more quickly owing to the conditions under which the coloring has been carried out. Fruit for coloring should be harvested in dry weather, and very carefully picked.

EUROPEAN CONSUMPTION OF CITRUS.

Germany Next to Britain.

After Great Britain, Germany ranks as the largest importer of fresh fruits in Europe. Before the Great War, Germany's imports were only 10 per cent. below those of Great Britain, but since that time her imports have not increased to anything like the same extent as have those into Great Britain. From 1931 to 1933 Germany's imports totalled 46 per cent. of Great Britain's, but in the next three years, 1934 to 1936, they dropped still lower to 49 per cent. less.

Whilst this decrease was mainly in Apples and Pears, citrus fruits increased from 23 per cent. in 1913 to 51 per cent. in 1936, as compared with Britain. Taking the figures for 1936, it is seen that the main Continental countries accepted the following quantities, stated in boxes:—

	Oranges.	Lemons.
Germany . . .	8,418,500	2,334,400
France	7,257,200	898,800
Sweden	1,102,100	61,500
Norway (all kinds, total)		669,000
Denmark . . .	291,900	49,100

A NEW ORANGE DRINK.

"Green Spot."

In Canada, Green Spot Orange juice has become so popular that it is delivered daily to thousands of homes. Arrangements have now been completed to introduce it in England, and a subsidiary company has been formed for this purpose. Included in the programme of introduction is a comprehensive advertising policy, which includes press and radio publicity. It will be distributed through dairies and delivered by the milkman.

It will be available in half-pint bottles of a special design selling at threepence each. Later it is proposed to make it available in milk bars as well. One great appeal that is claimed for the drink is that it will be manufactured from fruit that is matured on the tree and not picked green, as is the case with fresh fruit for the table market.

Citrus in California

Acreage and Production, 1936.

The enormous increase in both acreage and production for citrus fruits is shown in the latest report of the Los Angeles Chamber of Commerce as covering the 1936 season. Bearing areas are shown in acres, production is expressed in boxes, and value in Australian currency:—

	Acres.	Production.	Value.
Oranges	172,234	28,007,887	£12,637,563
Lemons	35,107	7,342,344	£6,131,800
Grapefruit	15,318	2,134,756	£678,210
Miscellaneous	2,649	319,982	£250,000

Citrus Round the World

Swinging into berry culture, Florida is showing interest in Boysenberry cultivation. This berry is of the Blackberry type, is extremely hardy, resists low temperatures, and is drought resistant. Very suitable for jams, jellies, etc., and for canning, being a large fruit.

:: :: ::

To stimulate an extension of Florida citrus trade, the Association of American Railroads is considering a reduction of 50 per cent. on all Grapefruit consignments.

:: :: ::

Co-operative buying of fruit trees in Madison County is predicted to greatly increase plantings, buyers getting an interesting reduction for large orders.

:: :: ::

In March and April the Nichols Nursery at Winter Haven planted 4,000 Golden Lime trees.

For the first time in many years, Palestine Lemons were recently sold on the New York market, and averaged about 27/- per box. Since 1931 exports of Lemons from Palestine have increased from 8,000 boxes to over 31,000 boxes.

:: :: ::

A pageant depicting the history of the citrus industry in Florida from 1579 to the present time was a feature of the Golden Jubilee celebrations of the Florida State Horticultural Society in April last.

:: :: ::

More than two-thirds of the total agricultural income in Orange County (Calif.) was derived from citrus fruits in 1936. The value was £6,770,000.

:: :: ::

Florida now has 8,064,525 citrus trees growing in 1,463 acres of nursery. In 1935-6 nurseries distributed 1,626,586 different stocks.

Excess Grapefruit

37,000 Stores to Sell.

In the expectation that this season would give an increased harvest of Grapefruit by some 9,000,000 cases more than last year, a conference between growers and chain stores executives was recently held in Chicago when the latter agreed to harness their 37,000 food stores across the country in a special drive to absorb the surplus fruit. This special effort was conducted during January and February, and is reported to have been entirely successful.

Chain stores in America are approachable in circumstances like the above, and have conducted special drives to increase the consumption of various farm products, at the special request of the producers concerned. Supplementing the special consideration of the chain stores in the matter of displays and extra advertising, national newspaper and radio publicity is provided, and, for the time at least, the public become "Grapefruit minded," and sales increase greatly.

Even if this is a typically American method of co-operation, it brings results, and modifications might well be considered for Australian conditions. Any legitimate educational programme that will sell more Grapefruit, or any other fruit, is well worth consideration, or even copying.

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The common practice of finishing off a well-worn rear tyre by putting it on a front wheel is to be strongly condemned. From the safety standpoint, it is more important to have sound tyres on the front wheels than it is on the back ones, as, if a back tyre comes off or blows out, or if a bad skid develops when travelling at speed, it is very much easier to right the car than it would be if the same thing happened on the front wheel. Of course, it is necessary that a back tyre should have a fair amount of tread, to give it road-grip and minimise wheel spin and skidding, and it is no doubt because of these reasons that motorists have adopted the practice of putting new tyres on the rear wheels and then transferring them to the front when the treads have worn down.

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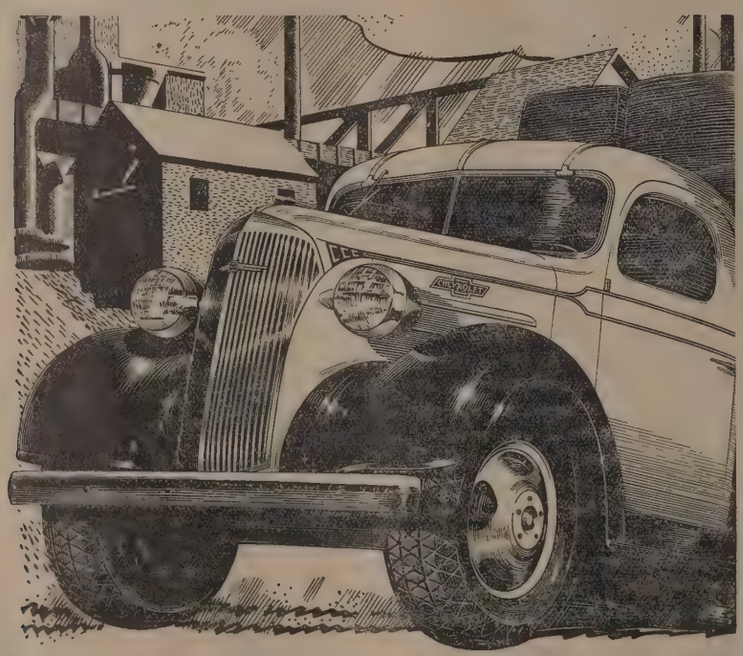

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HARD STARTING.

Sometimes drivers will not obtain the quick starting that they like. If a quick start is not forthcoming, it is a good practice, whether the carburettor be a modern "self-starter" or one of the old strangler types, to pause for half a minute after the first try. The reason for this is that forced evaporation produces intense local cold, so that, however well proportioned the petrol and air may be, and however good the initial disintegration, the spray is apt in very cold weather to be condensed by latent heat action to a semi-frozen deposit. The half-minute pause will allow the temperature of the manifold to rise enough for natural evaporation to take place.

A HINT FOR DECARBONISING.

It is frequently found that after a car has been decarbonised for the first time it uses considerably more oil than before. An explanation is that the layer of carbon which was scraped from the top of the piston in the process of decarbonising was previously forming an effective oil seal. A method of preserving this oil seal is to place an old piston ring on top of the pistons when they are being scraped, and remove the carbon from inside it only, leaving a small ridge of carbon on the outside edge of the piston tops. This method does not deteriorate engine performance to any noticeable extent.

OIL IN BRAKE DRUMS.

Sometimes, while touring, motorists may discover that oil has found its way into one or more of the brake drums, thus giving rise to slipping and inefficient braking. As a temporary expedient, a small packet of Fuller's Earth, purchased from any pharmacy, will mend matters satisfactorily. Dust a little of the powder on to the brake-drums and shoes. The powder will completely absorb the unwanted oil and render the brakes safe and efficient for the remainder of the tour. Do not dust the Fuller's earth too liberally over the brake shoes, for this would set up too fierce a braking action. At the conclusion of the tour give the brake mechanism a good cleaning.

A RUN-DOWN BATTERY.

When a battery which has apparently been in good order and well charged runs down after the car has been left standing in the garage for a few days, it should not be assumed that it has merely lost its "kick" because it has not been receiving the customary recharging from the generator. Either the cells are defective or there is a short circuit somewhere in the wiring.

A battery whose plates are in good order and in which there is no internal "short" due to the building up of a deep deposit of sediment in the bases of the cells should not be run down appreciably for at least a week or two when it is kept in idleness. When the trouble referred to is noticed, one should test for an external "short" by means of a voltmeter or ammeter. If there is no such "short" it can be assumed that the cells themselves are defective.

A girl has married a policeman whom she first met when he summoned her for a motoring offence. Now she's taken his name and address.

Repairing Door Frames.

Here's a point that may be helpful on light cars or utility trucks. If the doors show signs of sagging or looseness, the hinges should be overhauled, and also in the case of doors having a wooden frame, the angle pieces. If the corner joints have worked loose or warped, it is possible to strengthen them by making a cut with a fine saw diagonally across the corner and then inserting a thin piece of sheet metal, subsequently drilling through the wood and steel to provide holes for small bolts.

WARMING UP THE ENGINE.

Should be Done Smartly.

The modern practice is to warm up the engine fairly quickly, say at a speed of 800 to 1,000 r.p.m. This has two effects:—(1) It causes the oil to be thrown on to the cylinder walls, whereas an idling speed may not be sufficient for that; and (2) as the engine warms up quickly there is a shorter time during which condensation is likely to occur on the cylinder walls, such condensation and corrosion having been found to be one of the causes of cylinder wear.

CHEVROLET OWNERS' CLUB.

A meeting of the Chevrolet Owners' Club was held on Thursday, September 2, for the purpose of conducting a competition to decide the winner of the free "Romany Road" Caravan donated by Preston Motors Pty. Ltd.

One hundred and nine members participated in the contest, and the judges declared Mr. J. J. Smith, 16 Albert-street, Richmond, the winner, with a points score of 5,900.

The members present appointed their own Chairman and Judges to control the contest.

SHORT MOTOR NOTES.

Sometimes a fan belt will wear on one side more than on the other side, or will stretch similarly. If this causes it to jump off the pulley it may work well if changed around.

:: :: ::

If doors have to be slammed extremely hard to grip, a little penetrating oil on the hinges may make them catch better. A touch of oil on the tongue of the lock and the handle or the lock mechanism will also help.

:: :: ::

If leather upholstery gets dirty, do not try to clean it with petrol; soap and water is better.

:: :: ::

Clean windscreens reduce headlight dazzle. Fine particles of dust reflect the light and a dirty windscreen accentuates glare when driving into the sun.

:: :: ::

Inaccurate alignment of the wheels of a car makes for much increased tyre wear and adds very considerably to the risk of skidding.

SCENERY.

"Yes, we spent our holiday touring in the south. It was beautiful down there."

"Motored down, eh? Well, you must have passed some glorious scenery."

"Oh, we must have. Why, we averaged well over 400 miles a day!"

Tasmanian News and Notes

Weather and Blossoming :: Spraying :: Re-working :: Berry Fruits.

A SUMMARY of information received by the Chief Horticulturist from the District Orchard Inspectors, together with other matters relevant to the culture of fruit follows:—

Weather and Blossoming.

Temperatures throughout the month have been above average, and this following upon the extreme conditions during the Winter has resulted in very rapid growth and bud development. Many sunny days were experienced and conditions for the blossoming of Apricots and the earlier varieties of Plum and Peach were almost ideal for fertilisation purposes. In most areas the quantity of blossom varied from good to heavy and Apricots appear to be setting satisfactorily. Rainfall was again below average, particularly in the south and east, but fruit trees have not suffered, though the subsoil is comparatively dry for the time of year. The following rainfall data has been supplied through the Meteorological Bureau and indicates the position in the main fruit areas: Hobart, 63 points as compared with an average of 184 points; Franklin, 132 points as compared with an average of 316 points; Launceston, 246 points as compared with an average of 296 points.

Seasonal Work and Spraying.

With the continuance of dry weather, ploughing operations have been pushed ahead and the land is working very easily. Pruning is, however, more backward than usual; the lateral system is gaining rapidly in favor and buds look particularly well

During the month, nitro-caustic spraying was done on a larger scale than usual, and the trees should benefit materially both from the manurial stimulus and the control exercised on powdery mildew. Overhead spraying plants, as already mentioned, have increased, and the attention of growers is again directed to the advantages of an 80 ft. hose and closer lines over the unwieldy 120 ft. lengths so frequently used. In some districts portions of the pipelines were burst by the severe Winter frosts, and it would be advisable to make sure that all such fractures are attended to before spraying commences in earnest.

Most growers are depending upon lighter oils applied at the "green tip" stage in combination with Bordeaux for the control of red spider. It is true that the eggs are more vulnerable at this period, but if spider is really bad, the dormant strong oil applications give much better results. Since the use of nicotine sulphate for the control of "canary fly" at the calyx and later stages of growth has increased, red spider appears to have also been reduced, and some growers claim to have practically eliminated it in this way. Several areas are under observation, and it is possible that some trials will be conducted at a later date to test the extent of the control.

Reworking.

The stimulus to the reworking of Pears resulting from the restriction of varieties for export has lead to a heavy demand for scions of Comice, Winter Cole, Josephine, Beurre d'Anjou, and Packham's Triumph. Most Pear growers are already grafting, and it is likely that this will encroach upon the time available for Apples. The District Inspectors have not been able to supply the heavy demand for crimson Apple sports. Growers who have only limited quantities of these should strip a few trees for budding in February, and thus expedite the changing-over process. The variety, French Crab, is now a source of some anxiety, for it is practically certain to suffer through the quantities of canned Sturmers with which it will indirectly come into competition in the near future. In anticipation of such a trend it may be policy to materially reduce the areas planted with this variety.

Berry Fruits.

Generally speaking, Raspberry areas are in good trim for cropping, but those who have not yet tied or supported their canes are advised to hasten this operation. More drainage may be done by the strong September and October winds than at almost any other period of growth—it is not unusual to see fully 25 per cent. of the young buds and fruiting branches either rubbed or broken off prior to blossoming in plantations where the necessary precautions have not been taken.

Both Loganberry and Raspberry plantations which suffered severely last season from anthracnose and rust should receive a 8 - 8 - 40 Bordeaux spray.

Quite a number of young Black Currant areas have been set out since July, and older plantations have received considerable attention as regards manuring cultivations. Pruning has, however, been somewhat neglected, and since practically all the crop is borne on the young growths produced during the previous Summer, steps should be taken to have a continuous supply coming forward. Where Currant borer is prevalent, late pruning is recommended since most of the borers make towards the tips of the affected shorts prior to pupating and may, therefore, be removed and destroyed with the prunings.

Gooseberries are now in blossom, and a very good promise is evident. the earlier varieties setting heavily. Strawberries in some districts are coming into growth much earlier than usual, and blossom trusses have emerged from the crown rather sooner than is desirable. Strawberry aphis, leaf hoppers and red spider are prevalent in older beds, and in those where the old leaves were not removed in Winter. Since insect pests are responsible for the spread of virus, their occurrence in such numbers is serious.

Packing Classes.

The State School packing classes will be concluded at the end of September. The interest and keenness of the pupils will ensure some excellent exhibits at the Show, and the task of the judges is certain to be difficult as it is expected the standard will reach a uniformily higher level than last year.

Automatic Scarecrows . . .

AMERICAN INVENTION

An automatic but harmless flash-gun promises to replace the scarecrow as a means of keeping birds from ripening fruit crops in the United States of America. It has been found that the common effigies were effective in scaring away the marauders for only a few days, until the birds got used to them.

Mr. H. A. Cardinell, of the Michigan State College, became interested in testing the gun when he was confronted by an orchardist who said that birds had so attacked his orchard that he only gathered 40 lb. of fruit from a block of 40 well-established Cherry trees. The research worker sought information from users of a carbide automatic gun as to the success achieved in keeping at bay certain troublesome pests.

A rancher in Idaho stated that the device had been most satisfactory in keeping predatory animals from the lambing ewes. A Californian with a vineyard in the mountains said that the exploders certainly helped him to keep deer out of his vineyard.

Thus encouraged, Mr. Cardinell tried the guns in Cherry orchards at Michigan, and it was found that Cherry eating birds did not like to get near to the devices. The investigator concluded that the gun was more effective than shooting at the birds, and the cost was very much less. It was important, too, he considered, that no harm was done to the birds, for, though a nuisance near harvest time, they did invaluable work throughout the year as destroyers of insects.

One exploder was placed in each of the block of trees under test. These were placed high on a pole above the trees. The loud reports from the gun, which occurred every two to five minutes, were accompanied by a sudden movement of the device. These features gave the birds a severe fright. The exploder is operated by gas formed by water dropping on to calcium carbide.

LAW SOMNER PASTURE BOOK.

The Pasture Book recently issued by Messrs. Law Somner Pty. Ltd., of 21-23 Elizabeth-street, Melbourne, was prepared with a view to aiding graziers, farmers and orchardists in the sowing of pastures and fodder crops suitable to their respective districts.

Items dealt with include: The Advantages of Improved Pastures, Establishment and Management of Pastures, Control of Noxious Weeds, N.Z. System of Certification of Seeds, Wimmera Rye Grass, Phalaris tuberosa, Rhodes Grass, Clovers, Lucerne, Swamp Grasses, Summer Fodder Crops, Root Crops, Winter and Green Manuring Crops, the Place of Fertilisers in Modern Pasture Development, Need and Value of Ensilage, Seed Cleaning, etc. Helpful illustrations are included throughout.

THE MENACE OF NOXIOUS WEEDS.

We have received an article from Messrs. H. V. McKay-Massey Harris Pty. Ltd., makers of the well-known "Sunshine" farm implements, in which is stated that persistent cultivation ensures effective, low-cost control of noxious weeds. The amount of loss in productiveness suffered by primary producers because of weeds is astounding, and well justifies the expense of modern farm machinery.

The article advises the preparation of a booklet "Know Your Weeds," being distributed by the Bank of New South Wales in an effort to assist the farmer in lowering costs from weeds. This booklet can be obtained upon application to Box 36A, G.P.O., Sydney.

Quotations from the booklet are quoted, also some comments by Mr. J. A. Morrow, B.Ag.Sc., of the State Experimental Farm, Rutherglen, Vic.

Young reporter: "To what do you attribute your great age?"
Grandpa: "To the fact that I was born so long ago."

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THE PIG PEN

CLASSIFYING PIGS.

The following general description gives the names generally applied to pigs as recognised in the trade:—

Suckers, Weaners and Slips: Young pigs from a few weeks old to those able to leave the mothers to be fattened.

Porkers: Good to prime conditioned pigs, weighing from 50 lbs. to 80 lbs. (dressed). Suitable for cutting up into pork.

Baconers: Good to prime conditioned—pigs weighing from 110 lbs. to 130 lbs. (dressed). Suitable for making bacon.

Stores: All pigs in low condition, suitable for fattening for market.

Backfatters: Heavy pigs, fat, and weighing upwards of 180 lbs. (dressed). Suitable for sausage manufacturing and ship's stores.

Choppers: Any pigs of rough and inferior quality, weighing (dressed) over 180 lbs.

WHICH BOAR?

Get a Good One.

In these days of such keen competition, breeding stock has to be particularly good, and every pig worth its place on a farm must stand on its own individual merits to be carried in the stock.

There are still many people who ignore the fact that the boar is half the herd. The buyer should consider the place where he intends to spend his money. Go to a breeder with a good reputation. Such a man cannot afford to sell an inferior animal.

When the boar is picked, there remains the question of price. Many a buyer lets a good animal go because the seller wants a little more than he is willing to pay—a mistake easily made. After all, one cannot expect to take the pick of 20 or 30 animals at the price of the worst.

AND NOW, CANNED HAMS.

New Australian Industry.

If the Belgian firm of Poels & Co. carry out their intention of developing markets for canned Australian hams, it will mean another outlet for the farmers' products. The company has numerous factories on the Continent and in Canada, so that they know the business and what they require in the way of the proper class of pork for their factory.

Their representative, Mr. Julius Weisz, has already established a factory in Sydney and says that large and middle Whites are best for his requirements, as they have uniform, smooth, meaty, long and lean carcasses. The white sows are prolific and have a good supply of milk for their litters.

To get the best results, he says, proper feeding is essential, and must include grain as the pork from grain-fed pigs is much better. Since continuity of supply is important, grain should be conserved for winter feeding.

SMOKED BACON.

A Preserving Process.

In addition to a drying and preserving action upon meat, smoking imparts a relishable flavor which adds to the value of the bacon. The process of smoking preserves flesh by coagulating the albumen near the surface, and forming a protecting envelope, states a writer in the N.S.W. Agriculture Notes.

It has been ascertained that in smoking bacon there is no loss of nutriment, and the finished product is as digestible as fresh meat. The smoke creates a distinct antiseptic or preservative action, apart from the dried albuminoid coating, by depositing on the surface creosote, formaldehyde, and pryroligneous or crude acetic acid. These check the action and growth of putrefactive organisms and their processes, retard decomposition, and impart a delicate and appetising flavor. The effect of all is nullified if the meat has not been properly dried before being placed in the smoke-house.

The N.S.W. Department of Agriculture has issued a pamphlet on "Bacon Curing on the Farm," and copies can be obtained free upon application, with a stamped, addressed envelope for reply.

TOO MUCH MAIZE

Makes Soft Bacon.

The contention of some Australian breeders that excessive feeding of maize to pigs results in soft bacon is corroborated by investigations undertaken in Ireland.

Experiments conducted by the County of Londonderry Committee of Agriculture showed that when excessive quantities of maize are fed in the rations of fattening pigs it is almost certain to injure the quality of the bacon.

Rations containing 20, 40 and 60 per cent. maize meal were fed to different groups of pigs, and it was shown that the group getting 60 per cent., and to a lesser degree the group getting 40 per cent., produced bacon that was poor in quality. Other trials in the counties of Tyrone and Fermanagh confirmed these results.

It is agreed that pigs fatten well on maize. In fact, maize is one of the richest of the cereals in carbohydrates and fat. It, however, produces a soft bacon of inferior quality, and for that reason the N.S.W. Department of Agriculture advises that maize should never constitute more than 50 per cent. of the grain ration, a more desirable figure being 35 per cent.

LICE ON PIGS.

There is only one kind of louse found on the pig, says an exchange. It is officially known as "Haematopinus Suis," and belongs to a family of bloodsuckers. It operates mostly behind the pig's ears and on the breast and causes irritation, rubbing, scratching, loss of condition and sometimes death in young pigs.

The treatment recommended is to apply weekly dressings of kerosene and motor lubricating oil in equal parts. Besides this, however, the premises should be disinfected, and all infected or dirty litter destroyed.

A U.S.A. farmer on relief was in need of feed for his pig, so he applied to the relief officer for a sack of shorts.

"Ha, ha, ha," said the girl at the desk, "you farmers make me tired. Shorts for a pig? Who ever heard of a pig wearing shorts? I suppose you'll be back to-morrow looking for a brassiere for your cow."

Cables—Monro, London Codes—A.B.C. 5th Edition and Bentley's

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Export & Commercial News

Fruit Shipments to England

Gas Storage of Oranges and Passionfruit

OUT-TURN REPORTS.

THE following reports upon shipments of Australian fruits have been issued by the Department of Agriculture following reports received from the Victorian Government's Commercial Officer in London (Mr. S. R. McColl).

"Anchises": 10,412 bushel cases. Varieties: Yates, Rokewood, Grannies, Rome Beauty, Democrat and Cleo. Condition generally satisfactory.

Whilst there were many well-graded and packed lines in this consignment of Apples, there were also quite a number showing undersized fruit for the particular size under which they were labelled. The proportion of undersized Apples was as high as 60 per cent. in some cases. There were also a number of instances of slack packs, when the sizing was correct, due to use of wrong counts.

There has been far too much fruit showing these defects in recent shipments, and one cannot too strongly condemn such packs. Whether the inclusion of so much undersized fruit is due to ignorance or carelessness on the part of growers, or is done deliberately, would probably be best known to Departmental officers in Melbourne, but the effect on the minds of buyers in the United Kingdom is the same. Where contracts are entered into for the supply of certain sized Apples, and the packs include as high as 60 per cent. under these sizes, Buyers say quite frankly that they consider the packing is being done deliberately. Whatever the reason for the inclusion of the undersized fruit may be, it is certain that strong measures should be taken in the future to prevent a recurrence of these faulty packs. Just recently two buyers in Liverpool informed me that they would not purchase any more Victorian Apples. If exporters contract to sell by size, then a uniform pack of that size must be produced.

Another matter which should receive attention is the adoption of one uniform standard pack for each type of case now being used for both Apples and Pears for export. There must always be some confusion, and subsequent disputes as have occurred this season, unless this is done. For example, with Apples, say the 198 count. This is now packed to include a large number of both small 2⅛ in. and large 2¼ in. size. This pack was originally for 2⅛ inch Apples. If a grower packs to this count and labels his pack 2⅛ in., there will obviously be complaints from the buyer whose contract says 2⅛ in. size Apples. If the count system is to be the standard pack, then those exporters concerned must arrange their contracts to sell by count and not by size, as is done now in some packs.

"Dunedin Star.": 5,801 bushel cases of Pears. Varieties: Josephine, W. Cole, W. Nelis, Packham and Madame Cole.

With few exceptions the condition of the several varieties of Pears in this consignment was very satisfactory, most marks showing a green hard, sound condition. A few lots of Winter Nelis, Madame Cole and Josephine varieties were a little forward, but still in a firm, to very firm, good marketable condition.

The quality was generally up to the respective grade under which they were packed, with some Packhams and Josephines very clean and good quality. A few lots of Winter Nelis and Coles showed a lot of skin blemishes and were just about up to grade.

Grading and Packing were satisfactory in most marks.

The report concluded with the following statement: It is a very short-sighted policy for growers to allow their fruit to be badly graded and packed. Buyers here are probably the keenest in the world, and are not slow to find minor faults, let alone glaring instances of irregular packs.

If Victorian fruit is to hold its own in competition with that exported from other States, it is absolutely essential that growers and exporters generally give more earnest attention to the production of a high-grade pack, both in quality grading and finish, and not destroy the sound reputation which Victorian Apples have hitherto enjoyed on this market. Fortunately, the majority of our growers are exporting a satisfactory pack, but there are many others who are more than enough to do a great amount of harm to the Victorian export Apple trade.

Gas Storage.

In addition to the above reports, the South Australian Department of Agriculture forwards the following report from the Trade Commissioner in London (Mr. C. F. G. McCann) concerning the trial shipment of fruit in gas storage which we described in our August issue.

I saw Oranges and Passionfruit on Covent Garden this morning that were discharged yesterday ex "Brisbane Star." The fruit was loaded in Sydney and arrived in excellent condition. The Oranges were sound and a glossy rich color, particularly noticeable when compared with South African and Brazilian on adjoining stalls. The passionfruit was in perfect condition, dry, with no sign of waste, and just as if it had been freshly picked.

I understand from the official in charge of the shipment that he would have liked to have carried the fruit at nearer 50 degrees than the actual temperature used, viz., 32 degrees, but the heavy piping in the chambers made it impossible to obtain a higher temperature. It was also suggested by him that a lower degree of humidity would have been preferable. Despite these alleged disadvantages, the splendid condition of both fruits when opened up on the market, was extremely satisfactory.

It is claimed that Peaches, Cherries, Bananas and Lettuces can all be satisfactorily dealt with by the gas process, and at a cheaper rate than the present method of refrigeration. I have no means of checking the transport costs, but if such is the case, the gas process certainly warrants further trials. Unfortunately, the market price for all fruits at the moment of writing is dreadfully low. Oranges in particular are difficult to sell, even though it is possible to buy Brazilian at 7/6 and South African at 10/-. There are still some South Australians available, and some still unsold after four weeks' exposure since discharge from the ship.

These Oranges have kept their color and brightness extremely well, and are making prices a few shillings per case above all other Oranges. Brazil and South Africa must be losing heavily over this season's operations, particularly the former, whose Oranges have been improved considerably of late years in packing and general appearance. An extremely pleasing feature was the exceptionally attractive label used by the New South Wales Passionfruit shippers, particularly noticeable when compared with the bleached and faded appearance that the yellow background gives to the new Riverland label. There is a very limited demand for Passionfruit, however, and the small trade existing is more than met by the Madeira shippers who have been supplying this market with regular shipments for years at 3/- to 4/- per case.

A.F. & P. CO. v. E. JOHNS.

In the Causes Court, Sydney, on September 2, the Australian Fruit and Produce Co. sued Edward Johns, of Haberfield, to recover £1,344/18/6, alleged to be the balance due on accounts by him to the company. Defendant denied indebtedness.

After evidence had been given the jury, by consent, was dispensed with, and judgment was entered for the plaintiff company for the amount claimed.

NEW REGISTRATION.

Dooralong Citrus Packing House (Arthur C. Ditton, Percival G. Whiteman, and Wilfred and George Barrett), Dooralong (N.S.W.), fruit packers, etc. On 30/6/37, Wilfred Barrett became owner. Reg. 7/9/37.

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PEARS and APPLES

A few days saved mean the difference between profit and loss . . . . . .

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London is reached by express freight trains in three hours from Southampton—All fruit unloaded in Southampton to-day will be at Covent Garden, Spitalfields, or Borough Market for early morning market to-morrow, with days saved as against fruit discharged by ships calling at Continental and other outports first. The slight additional cost is altogether outweighed by the tremendous advantages of days saved.

Deterioration is avoided by special arrangements for sorting to mark, and quick insulated trains direct to London.

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Shipping Fruit in Gas

Result of Experimental Shipment.

READERS will remember that in last issue we reported the departure of the "Brisbane Star" with an experimental shipment of fruit being conveyed in gas storage, under a patent system sponsored by the Elgin Gas Corporation of Sydney, and accompanied by Mr. Frank Payne, chief engineer of the Corporation.

Now a report comes of how the shipment arrived and opened up in London, after a quick voyage from Melbourne without stoppage en route: Passionfruit and Oranges, 100 per cent. condition; Lemons, 95 per cent.; Tomatoes, nil, did not carry well because of humidity.

Included in the consignment were 163 half-bushel cases of Passionfruit from Mangrove Mountain, most of which had been wrapped in plain sulphite paper. The fruit was well colored and well filled with pulp, in sound condition, and well packed. The same district provided 37 cases of Lemons, some of which were greenish-yellow in color, with a few intermediate crop fruits. The Oranges comprised 33 cases of Joppas and Jaffas, four of Parramattas, six of White Silettas, and six of Washington Navels. The Committee of Direction of Queensland provided 29 half-bushel cases, but some of these had to be repacked owing to the presence of traces of grub attack and breakdown.

Referring to the result, the corporation states that this is the first time that Passionfruit has arrived in London in 100 per cent. condition, and it is also a very good result for the Oranges. The presence of some intermediate crop Lemons which, under normal conditions, would be rejected for export, probably accounted for the 5 per cent. loss.

The Tomatoes were drawn from the Bowen district in Queensland, and spent approximately a week in the train without refrigeration before arriving at the ship's side. When repacked, they were classed as "condition fair, color light green to pink." The Tomatoes were not included in the demonstration,, but were sent merely to ascertain whether they could be held even at that advanced stage of maturity.

The fruit exporters and the growers regard the demonstration as having been eminently successful, especially the Passionfruit growers, who consider that an enormous market overseas for this type of fruit can thus be opened up.

BRITISH EXPORTS UP.

Of Interest to Australia.

Because Britain is the largest consumer of Australian export goods, her economic conditions are of importance to Australia, even apart from the satisfaction that will be felt at the definite return to prosperity which Britain is experiencing.

Taking August figures, the latest available, Britain's exports were the highest for that month since 1930, and represented a value of over £42,000,000 as against £35 million in August, 1935, and £34 million in the same month of 1934.

Imports during August also showed a decided rise with £86 million as against £66 million, and £59 million for August in the preceding two years. The three months, June to August, provided the highest value of imports ever recorded for that period, testifying to the increasing spending power of the British public, a reflex from improved economic conditions.

Cable Address: DAVIS, MELBOURNE. Code: "ABC," 4th and 5th Editions. Box, G.P.O. 148B.

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Trade With Canada

Increased Concessions

THE doubt as to the continuance of the conditions instituted by the Ottawa Conference were set aside by an announcement from Canberra on October 1 that increased concessions have been extended by Canada to Australia, which will improve the trade balance between the two countries.

The basic principles of the 1932 Treaty have been retained. Included in the new agreement is that Australian dried fruits will retain the 4 cents per lb. preference. Newsprint from Canadian paper mills will come into Australia at British preference rates, and other preferences, both ways, will be observed.

Up to date the balance of trade has been greatly in favor of Canada and the arrangement has been extended to give Australia a stronger export market for certain of her primary products. The new agreement holds indefinitely, or until notice from either side is given requesting a cancellation or a review.

Up to June, 1937, Australia imported goods from Canada to the value of £7,566,275 for the year. Canada bought Australian goods to the value of only £2,183,857. In the previous year the respective exchanges were £6,733,252 and £1,322,178, so that it will be seen that in the past twelve months both exports to and imports from Canada have increased appreciably.

Included in the reductions of duty into Canada are:—Passion Fruit pulp, from 1½ cents per lb. to free entry; Pineapple juice 15 per cent. to free entry; syrups of Orange, Passion Fruit, Lemon and Pineapple, from 15 per cent. to free entry.

PORT OF LONDON

London still keeps its strong hold on imports, because it is, in the long run, the most profitable market for Australian and New Zealand produce. Some reasons for this being the vast immediate population served by the port, and because marketing, financing and distribution can be more easily and regularly effected through London than elsewhere. For the reasons mentioned, and also because London is in closer contact with world influences, buyers for multiple store proprietors and large consumers throughout Britain almost invariably operate from London.

Again, the Port of London Authority does not work for dividends, all profits go into reduction of rates, or improvements. Three times since 1928 charges have been reduced, up to £1,000,000 sterling a year in the interests of producers. It is truly co-operative, the larger the business the lower become the rates. Naturally the outports desire to extend their business, and so they should. Goods of the right quality should be sent to their ports, if already purchased, and the more direct shipments they get the better for all concerned, but business acumen should be used.

London's Banana Business

Of the main European countries, Britain, France and Germany take the most Bananas, amounting to approximately 700,000 tons per year. During both 1935 and 1936 Great Britain consumed 310,000 tons per annum, an increase of 50,000 tons over the two preceding years. Germany's receivals dropped from 111,000 tons in 1932 to 67,000 tons in 1935, but last year they increased to 124,000 tons.

France took 172,000 tons last year, exceeding the two previous years, but were still below the quantities of 1931 to 1933 averages. The Netherlands take an average of 34,000 tons per year. Spain took 29,000 tons in 1935, but figures for 1936 are not available. Italy's imports of Bananas have jumped from 2,000 tons in 1931 to 19,000 tons in 1936. Belgium took 19,000 tons, only half of her imports in 1932. Receivals by Denmark have declined, Finland has increased her imports, and Switzerland, Sweden and Norway are slowly recovering from substantial declines in Banana imports.

SOUTH AFRICAN EXPORTS DOWN.

In All Fruits Except Grapes.

As compared with 1935-36, the export season for deciduous fruits from South Africa, which closed in July, shows a decline of 21 per cent., and represents a total shipment for the season of 3,395,000 cases.

A study of the table of exports shows that Grapes have steadily increased each year until 1,849,014 cases were shipped this past season, making the largest individual contribution. Next came Plums and Prunes, with 583,618 cases, Pears, 473,970 cases; Peaches, 320,053 cases; Apples, 57,993 cases; and Apricots, 35,279. Including all deciduous fruits, the total quantities in the last three years have been: — 1935, 3,269,602 cases; 1936, 4,288,255 cases; and 1937, 3,395,269 cases.

Apples, Apricots, Melons, Nectarines, Peaches, Pears and Plums all dropped back considerably in 1937 as compared with the previous year.

N.S.W. COMPANY COMPULSORILY WOUND UP.

The New South Wales Equity Court, on August 30, ordered the compulsory winding-up of the fruit agency firm of Pitts & Lehman Ltd., Sydney. The company had previously gone into voluntary liquidation, but a judgment creditor, Mr. Allan Grant Forsythe, of Kingsvale, Young, petitioned for an order directing that the company be wound up by order of the Court. Mr. A. E. Campbell has been appointed official liquidator.

The company was formed in May, 1935, to acquire from William Pitts and Joseph Mortimer Lehman, trading as Pitts & Lehman, the business of merchants and exporters, The capital of the company is £5,000, in £1 shares, of which 2,500 were issued as fully paid-up and allotted to the vendors.

Twelve creditors (£1,938) were in favor of compulsory liquidation, and fourteen (£1,681) supported voluntary liquidation. The resolution to go into

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Regular Consignments of well Packed and Graded Fruit Realize Best Prices.

voluntary liquidation was passed at 10 o'clock on the morning of August 11. Later in the day a meeting of creditors approved the shareholders' resolutions, including the appointment of Mr. S. G. Rogers as voluntary liquidator. At the meeting of shareholders only two members were personally present, and they also represented three others by proxy.

In the course of judgment, his Honor said that he thought he should defer to the views entertained by the creditors desiring compulsory liquidation rather than to those of them who, apparently because it would be less expensive, preferred a voluntary winding up. Opportunity for probing into any matters requiring investigation could be done more cheaply and expeditiously by an official liquidator.

The latest import figures available show that Netherlands India, comprising Java, Sumatra and other islands north of Australia, with a population of over 60 million people, imported in 1935 the following dried fruits: Dates, 1,540 tons, and other fruits 1,565 tons. Of the latter, Australia provided only 280 tons.

Interstate Market Notes & Prices

FRUIT PRICES IN THE SYDNEY MARKET.

Survey of Operations for the Period August 25 to September 25, 1937.

UNOFFICIAL reports from many sources indicate that the flowering and setting season on the orchards of the State has been generally satisfactory. Reports are not yet to hand regarding the effect, if any, of the recent reversion to Winter weather, but from the city end, prospects favor good average crops. The usual "false" Spring was apparent about the middle of September, but by the 21st, cold weather returned and consumption of fruit was reduced, buyers reverting to vegetables.

The period under review has been one in which arrivals of most fruits have been lighter than usual at this time of the year. Apples were a definite exception to this position, as is indicated by Tasmanian average weekly arrivals, which were 25,889 cases as compared with 14,315 cases in 1936, and approximately 18,000 cases in 1935. These figures include a small unknown quantity of Pears, which comparatively do not alter the position. Light supplies of citrus fruits have been apparent, and values of naval Oranges, common Oranges and reasonably good Mandarins have been at a better level than for some years. It is of interest to note that although Lemons were much less obvious than usual, values were no higher than is customary, the grower, however, being very much in pocket by escaping the marketing costs of a surplus that would have been unsaleable.

Most navel Oranges showed maturity earlier than usual, and the market in consequence, received supplies of fruit that required immediate sale and consumption. Most navels must now be marketed, and Vals. appear due for popular favor to a greater extent each day. Export has not been considerable to the U.K., but some fruit has been shipped to Canada, and the "clouds of war" in the East have had a repelling effect upon business on the Singapore, China, Japanese routes.

Despite warnings over a period of several years, that the price of Apples would depreciate, and although earlier this year heavy supplies from all sources were indicated, N.S.W. growers have continued to hope for Granny Smith prices of previous years. The slowness of sale, however, has given concern to vendors, and steadily they have endeavored to induce greater clearances of stocks so that later in the season higher values may be attained.

Tomato values have achieved the expectations of the most optimistic, particularly when scientific production and packing have accompanied the expectations. N.S.W. glasshouse fruit, as well as Queensland field grown fruit, have shared in the good demand, and there are yet several weeks to pass before North Coast fruit is likely to enter the field.

Queensland growers are receiving much money from this State during recent months, and the competition of attractive tropical fruits must be considered as further reason for better grading and packing by the producer of this State.

Apples: The disposal of Apples has created a very definite problem during the period under review. As was stated earlier in the season, supplies in Tas. and Vic. were larger than ever previously, and at the same time it became evident that N.S.W. supplies were also on the heavy side. At the end of August, Tas. arrivals were in the vicinity of 31,000 cases, but on September 21 this had been decreased to 21,000 owing to each week witnessing a carry-over of a considerable quantity. Aside from the many questions that are troubling the Tasmanian fruitgrower, many of which have arguments for and against them, there does not appear to be any argument against the claim that fruit from Tasmania must be repacked after release from cool store and before despatch to the mainland. The absence of this practice underlies the arrival of large quantities of fruit that prior to cool storing was probably up to grade, but which later in the year displays over-maturity. It is regrettable that the Sturmer Pippin is not appreciated, and advertising of this product should be to the advantage of the producer.

During the month, the varieties that are practically finished are Cleo., most G.F., most L.P., and R.B. S. Permain are also well advanced in their season. Arrivals now chiefly comprise French Crab, Demo., Crofton and Sturmer.

Out of the chaos that existed at the beginning of September, has appeared a preference for colored Apples, particularly Demo.

Only small quantitites of Vic. Apples have found their way to this market, Yates being the chief arrival.

N.S.W. Granny Smiths have appeared in increasing quantities as the month developed, due to growers and vendors appreciating that the season was becoming late, and that present values must be accepted if the usual high prices later in the season were to be achieved. There has been more than the usual ice-scald and breakdown, and there are some indications that the cool store capacity this year has probably been strained to the utmost. At this time last year, G.S. were selling at from 8/- to 15/-, but the present range from 6/- to 10/- is just what many growers in this State have been anticipating would occur any year during the last three or four years.

N.S.W. Demo. are being released more rapidly also, and up to 7/6 has been obtained. Some of this type appears of excellent quality, upon release, from the color, but a browning of the flesh under the skin has quickly developed.

***Leading Agents** in the*

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BUY DIRECT, AND SOLICIT TRIAL CONSIGNMENTS.
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WELL GRADED AND WELL PACKED ALWAYS FINDS A READY SALE IN QUEENSLAND.

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New South Wales: Griffith Producers' Co-op. Co. Ltd.
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Del. in their exclusive way have experienced satisfactory demand, and although values are only to 15/- there have been occasions when several shillings higher have been obtained.

Prices: Crofton (Vic.), 5/- to 8/6; Del., 6/- to 15/-; Demo., 4/6 to 7/6; F.C., 3/- to 7/-; G.F. (Tas.), 3/- to 6/-; G.S., 4/- to 9/-; Jons., 4/- to 7/-; R.B., 4/6 to 6/6; Scarlet P., 4/- to 7/-; Sturmer, 2/6 to 5/-; Yates, 5/- to 8/6; Extra Fancy higher — Domestic 1/- to 2/- lower.

Pears: The market is now practically bare of this fruit soon after the limited consignments arrive, and we have practically seen the last of Giblin, Keiffer and B.B. for this year. W.C. also are practically finished, and the public has now to be contented with P.T., B.P., and a few other types. Values vary considerably as is customary at this time of the year, due to the variations in keeping quality that this delicate product displays. The chief arrivals of course are now from Victoria.

Prices: Broome Park, 8/- to 10/-; Jos., 8/- to 11/-; P.T., 8/- to 13/-; W.C., 8/- to 12/-; W.N., 8/- to 13/-; Extra Fancy higher—Domestic 1/- to 2/- lower.

Bananas: The Sydney market has received approximately 20,625 tropical cases during the last four weeks, an average of 5,156 cases per week, so that it becomes evident that the yield at the present time is lighter than is customary. Of this quantity reaching Sydney, N.S.W. forwarded 14,425 cases, and Queensland 6,200 cases. It should be recollected though that additional supplies have been forwarded direct to Newcastle and Broken Hill in this State, and that direct even supplies have also found their way to the markets of Melbourne, Adelaide and Tasmania. As a result of this even distribution, values have been maintained at a satisfactory level, prices in some instances exceeding the figure of 23/- to 28/- per trop. case. At the end of August prices were mostly at from 20/- to 27/-.

Citrus Fruits.

Grapefruit: Due to preceding years of drought, the market this season has not witnessed the sight of many cases of Grapefruit stale and shrivelled, and generally speaking clearances have been effected reasonably well, according to weight and appearance. The heaviest supplies have been from the Irrigation Area and were of the Marsh Seedless type, but the thickness of the skin has not appealed to buyers, with the result that the Wheeney type arriving mostly from coastal sources, has usually sold more easily. One has formed the opinion that buyers are gaining a greater appreciation of the juice content of the Wheeney and are overlooking the disadvantage of a few seeds. Only a few consignments reached the market from Curlwaa on the River Murray.

Prices: N.S.W. local, 3/- to 6/-; Wheeney, 7/- to 10/- bush.; inland, 5/- to 8/-, few 10/- bush,; two-bushel crates to 13/-.

Lemons: Similar conditions existed in relation to this fruit, that is, supplies have not been as great as usual, and it is only latterly that stale fruit has been observed on the market. Inland supplies have been very light, and seldom above 7/-, although latterly some sales were made at 9/-. Peel buyers have operated in a small way on large sizes of fruit possessing a clean skin, but values were not very satisfactory.

Prices: 2/6 to 9/- bush.; two-bushel crates, 10/- to 12/-; factory, 2/6 to 3/6 bush.

Oranges: Navels: Coastal supplies following the drought season have been very light, and most supplies were of large fruit from the Irrigation Area. On September 1 it became apparent that Navels were on a lower level on the average, and this was due to the preponderance of counts 72 to 113 per case. About the same time, advanced maturity became apparent in most of the fruit, and that which had been treated for removal of red scale required immediate sale otherwise breakdown occurred in the market. Seldom has the inland fruit reaching the market sold above 8/6 per bushel, much of the best quality fruit being sold direct for country order purposes. Small releases of Mangrove Mountain Navels have been made, and the firm quality of this fruit has made it popular for long distance travelling. The season is now well advanced and it is apparent that most growers consider that the fruit must be marketed. Consignments from S. Aust. varied from 5/- to 14/- and 16/- bush., while the Vic. sold at from 4/6 to 8/-. Due to the late rains received in N.S.W. last year, there were successive flowerings of the Navel tree and successive crops apparently resulted. These appeared recently, and inspectors were compelled to intervene and warn both growers and agents that dry fruit must not be supplied. This applied particularly to the Thompson type, and some Washington also were too raggy to warrant marketing.

Prices: N.S.W., 5/- to 10/-; S. Aust., 8/- to 14/-. Vic., 5/- to 8/-; plain, 4/- to 6/- bush. Two-bushel crates 8/- to 11/-, few 12/-, inferior from 5/-. Second crop Wash., 3/- to 5/-, Thompson 2/6 to 4/- bush. Valencias, 4/- to 7/- bush.

Other Oranges, 4/- to 6/-, few 7/6 bush.

Mandarins: N.S.W. local, Emperor, special firm 8/- to 12/- bush., few higher. Others from 2/- to 6/- bush.

Loquats: Showery weather followed by strong westerly winds played havoc with this fruit, and there has not been the customary appearance of choice mammoth variety. Prices: N.S.W. 2/- to 6/6, Mammoth to 8/- half bush. Small and inferior unsaleable.

Papaws: Arrivals for the month from Queensland totalled 1,090 cases. Much of this was handled by the selling floor of the C.O.D. and values have been fairly stable, being 14/- to 16/- at the end of August and 12/- to 14/- at the time of going to press.

Passionfruit: These increased in supply latterly, due to strong winds causing the fruit to drop, and values are now a little easier, 10/- being top price, while inferior fruit (which classification includes that which is light and that which is affected by "bullet") has been difficult to sell at 2/-. During the middle of September, this product suffered somewhat due to the barrowmen being attracted by the large supply of Strawberries that were available, and stocks of medium and inferior fruit were neglected. Prices: N.S.W. 6/- to 8/-, special 9/-, few 10/-, inferior from 2/- half case.

Pineapples: Queensland forwarded 13,582, and values throughout the month have continued around 7/- to 11/-. Much of this fruit was cleared by the selling floor of the C.O.D.

Strawberries: Production this year has exceeded all previous records; 12,210 trays and 2,820 crates of boxes came in from Queensland. N.S.W. supplies have been inconsiderable, which is fortunate considering the quantity of Queensland fruit available. Prices: N.S.W. 6/- to 10/- dozen boxes. Queensland 3/- to 5/- tray; 6/- to 12/-, few 15/- dozen boxes.

Tomatoes: Chief supplies have come from Queensland. Western Australian fruit also arrived during September, prices varying, but mostly being at a satisfactory level. N.S.W. glasshouse have experienced a good month and due to the shortage from all sources latterly values of this fruit as well as others improved. At the end of August, Queensland fruit was at from 4/- to 7/-, with some sales higher, and N.S.W. glasshouse from 12/- to 14/-, while repacked sold at up to 9/- half bush. At the present time Queensland fruit is at 8/- to 10/-, with special to 12/-, and inferior fruit mostly from Bowen from 5/-, while N.S.W. glasshouse is at 10/- to 15/-, and some sales as high as 20/- half bush. W.A. fruit mostly sold at from 5/- to 9/-. Reports from the North Coast indicate that the prospects for a good crop are excellent, and this fruit should be appearing early in October.—L. T. Pearce, Market Representative.

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QUEENSLAND.

Brisbane (16/9/37).—Messrs. Robsons Pty. Ltd. report as follows:—Jon., 8/- to 10/-, Croftons 10/-, G.S. 9/- to 11/-, Sturmers 6/-, Yates 6/- to 8/-, Demo. 7/- to 8/-.

Pears: W.C. 12/- to 14/-, W.N. 10/- to 12/-, Jos. 10/- to 12/6.

Citrus: Lemons 8/- to 12/-, Oranges 8/- to 9/-, Grapefruit 8/- to 11/-. Passionfruit, 9/- to 12/-; Papaws, 9/- to 11/- trop. case; Pineapples, smooth leaf 5/- to 7/-, rough leaf 6/- to 8/-; Mangoes 7/- to 10/-; Strawberries 6/- to 9/6 dozen boxes; Tomatoes, green 4/- to 8/-, colored 5/- to 9/-; Bananas, very scarce, 17/- to 24/- case.

Brisbane (17/9/37).—Messrs. Clark and Jesser report as follows:—During the month the market has been heavily supplied with Apples, and values have remained unchanged.

The present prices are:—Apples: Jons., if sound, 2½, 2¾, 8/- to 9/-; 2⅜, 7/6 to 8/-; 2¼, 6/-; Yates, 6/- to 8/-; small sizes 5/-; Rokewoods, 5/- to 7/-; G.S., 9/- to 10/-; Sturmers, 5/- to 6/-; Demo., 6/- to 7/-. Pears: W.C. and Jos. 12/- to 13/-, small sizes 9/- to 10/-, W.N. 10/- to 12/-, small sizes 8/- to 9/-. Oranges: Navels 8/6 to 9/6, Val. 9/- to 10/-. Mandarins: Emperors, large 10/- to 12/-, small 6/- to 7/-. Lemons: 8/- to 10/-. Pineapples: 7/- to 8/- case. Bananas: Very scarce, 18/- to 21/- case. Passionfruit: 10/- to 11/- case. Tomatoes: 9/- to 10/-.

VICTORIA.

Market Report for September.

SEPTEMBER trade was about normal. Citrus was rather disappointing in that more supplies arrived than were expected, especially of Navel Oranges, which, in this case, caused a slump in prices. Prices were not quite as good as in August, and both quality and condition could have been better. This position cleared up towards the end of the month. Other citrus fruit sales were normal, with prices slightly below normal for the season. Mandarins practically finished with September.

Oranges: Mediterranean Sweets and St. Michaels were still coming in as the month ended, with a slight improvement in clearances. Late Valencias started, but prices did not reach a satisfactory figure.

Lemons: Fair supplies, equalling the demand. Prices normal.

Grapefruit: Good samples sold well, after which there was a distinct drop in quality and price.

Apples eased during the month. Supplies were heavy and prices dropped. There was some drag wards the end.

Pears: Good Packhams went off w but there was little demand Buerre Bosc.

Passionfruit: Prices held and proved towards the end, with suppl falling off. Condition was not ge rally the best, a good percenta were scarred, probably affected early frosts.

Celery: S.A. samples finishing a quality dropping.

Pineapples sold well right throu but improved towards last we Supplies were satisfactory and pri steady.

Tomatoes: W.A. and S.A. arriv landed well and sold satisfactori Supplies plentiful.

Papaws: There is a growing mand for these tropical fruits. Pri were not prohibitive, and demand w increase.

Melons: Citrons were finishi very few available last week.

Beans: Northern N.S.W. Queensland arrivals sold well. Pri were good early in the month, the quality dropped and caused p prices.

WESTERN AUSTRALIA.

Perth (27/9/37).—Apples: Dun dumps 5/- to 11/-, R.B. 7/- to 12 Yates 6/6 to 14/-, G.S. 6/- to 15 Cleo. 8/- to 11/-, Demo. 9/- to 11 Rokewood 5/- to 11/6, Doherty to 11/-. Citrus: Vals., flats 4/- to 7 dumps 5/- to 11/6; Navels, flats, to 11/-, dumps 6/- to 15/-; Lemo 3/9 to 6/- (inferior from 1/-); Ma darins, 4/- to 9/6. Other lin Loquats 6/- to 8/- case; Tomato ex Geraldton, 15/- to 22/6 (infer from 5/-).

NEW ZEALAND.

Dunedin (25/9/37). — Mess Reilly's Central Produce Mart L report as follows:—Business duri the week has been quite satisfacto Increased supplies of early vegetab arriving. Smaller consignments Apples have been received. The mand is for good colored lines. St mers are in excess of requiremen heavy supplies of these coming hand ex cool store. There is a g enquiry for dessert Pears, and pri are firm.

The "Waitaki" arrived to-day w a large shipment of S. Aust. Orang consisting of Vals. and Navels, a bookings for these have been go A small shipment of Mandarins a Pineapples also came to hand by t vessel.

The market is well supplied w Cal. Grapes, some of the consig ments being very wasty, and realisi unpayable values.

The "Tainui" is due on October with a shipment of Jamaican Gra fruit.

Advice has been received that t "Maui Pomare" is due at Lyttleton the 27th with Niue and Samo Bananas. This fruit will come to bare market, and an excellent dema For ripe Niue Bananas there is excellent sale.

N.Z. Lemons are difficult to s values being low.

Christchurch hothouse Tomat are now coming to hand.

Prices (per case): Australi Oranges, Navels and Vals., 16/- 22/-, Cal. Lemons 68/-. Grap Ribiers 30/-, Red 30/-, White Malag 25/-. Bananas, ripes 23/6, Ma darins to 25/-, Pines 20/- to 21 Pears: W.C. 10/6 to 12/6, W.N. 10 to 12/6. Apples: Del. 5/- to 9/-, J 5/- to 7/-, Sturmers 6/- to 8/6, Cl 4/- to 6/-, small and inferior gra dessert Apples 2/- to 3/6, cookers 4 to 6/6, N.Z. Lemons 10/- to 14/-, N Grapefruit 12/6. (Per half cas Passionfruit 14/-, Raratongan Tom toes 15/-.

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Should Vegetables be Sold in Standard Packages

THE old belief that the vegetable-growing industry in New South Wales was chiefly confined to Chinese market gardeners is gradually becoming obsolete, and this industry has developed to such an extent that the value of production now exceeds £1,000,000 annually. As has been the usual experience in industries of this magnitude, such development has been attended by difficulties in marketing, particularly as regards costs associated with the distribution between producer and consumer.

The Department of Agriculture in New South Wales now has a scheme under consideration which is designed to reduce distribution costs, eliminate waste and afford greater protection to growers from dishonest or unscrupulous agents, says the N.S.W. Monthly Marketing Review. In brief, the proposals are:—

(1) Legislation to be introduced to provide that where vegetables are sold on a wholesale basis they must be in standard packages, the suggested sizes being 25 lb., 50 lb., and 100 lb.
(2) The vegetables affected to be:—Peas, Beans, loose Carrots, loose Turnips, loose Parsnips, Pumpkins, Swedes, Sweet Potatoes, Brussels Sprouts, Potatoes (new and old), and Onions.
(3) The grower's mark or brand to be stamped on the package.
(4) The agent disposing of the produce may open the package for inspection, but must sell it as a whole and not in small parcels.
(5) The agent must issue a receipt to the buyer with each sale which is impracticable at present.

The compulsory sale of vegetables in standard packages has been operating in Melbourne for some years, and has given general satisfaction, while in the Brisbane markets it has also been introduced with slight variations of the Melbourne system, and has proved successful.

Some of the benefits that the grower might expect to derive from this scheme might be summarised thus:—

The agent would be required to issue receipts for each sale and the Government Inspector engaged upon the work of inspecting agents' books would be able to confirm that the producer received the full amount realised by the agent for his produce, less permissible charges.

As the packages would be branded, the grower who put up a good pack would create a goodwill value for his consignments, or in other words he would build up a reputation for himself for good quality, and the buyer, knowing who the producer was, would in future ask for his brand and would probably be prepared to pay a premium for his supplies. At present the buyer obtains his supplies from the agent, and in most cases does not know who the producer is.

A grower who engaged in the practice of topping would, conversely, be required to take a lower price, and would be compelled to "play the game." A healthier tone would thus be created throughout the market.

Waste which occurs in the weighing-up of numerous small parcels would be eliminated, and the grower would be paid for the whole of his deliveries. At present it is common to see quantities of waste vegetables lying on the floors of the markets, and in a period of 12 months the value of this waste would aggregate a large amount.

Unfair competition as between agents in soliciting business would be obviated and distribution costs would be reduced as the necessity for the engagement of travellers by honest agents to counteract improper practices by their unscrupulous confreres would be removed.

It has been estimated that the adoption of the proposals would mean an additional £50,000 per annum to the vegetable growers of this State by the elimination of waste, the saving in distributing costs and the return of the actual realisations to growers.

The scheme has the support of the reliable agents in the markets who are anxious that a better feeling should be promoted between the two major interests in this great industry, namely the grower and the distributor.

Alternative suggestions have been put forward regarding the method of sale, one being that the package be sold by the agent without weighing, growers being allowed a margin of 1 lb. in each 25 lb. for shrinkage, etc., with a penalty for growers who do not pack the true weight. Growers would, of course, be expected to so pack that the net weight after shrinkage would be the standard weight. The other suggestion is that the packages—although standard in size—shall be weighed and the grower paid for the full weight. If the former were adopted the position would soon right itself as buyers would soon know from the brands who the growers were who packed short weight and would make provision in their prices in future to cover possible shortages when purchasing these brands, while the penalty provided would also be a deterrent.

As pointed out previously, agents who are desirous of dealing conscientiously with their clients can be seriously handicapped in their competition with less scrupulous sellers. It is contended, however, that improper practices would be rendered much more difficult by the adoption of the proposed new scheme as the enforcement of the docket system would enable the Government Inspector, as previously explained, to exercise a check that each grower received the exact amount realised for his produce, less authorised deductions. One important aspect of this particular proposal is that dockets could be issued on Government stationery numbered consecutively to fortify the system.

An improvement in existing conditions is long overdue, and the scheme outlined certainly does appear to offer a solution of many of the difficulties now confronting growers and reputable agents alike.

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Correspondence is invited by the Association.

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Poultry Notes— THE SUSSEX FOWL

Admirable for the Farm

IN the following article, one of our readers who is interested in poultry, though leaning a little to the fancy or exhibition side in discussing the breed, states that for dual purpose, that is both eggs and table poultry, the Sussex is a most useful fowl for a general farm on orchard. His argument would seem to support the question: Why run a lot of "scrags" when with very little extra trouble or expense you can have a flock of really useful birds that will be a pleasure and an asset. He says:

John Bull, in his "tight little isle" has always been famous for the production of high-class stock, especially favoring varieties that make for good eating. For instance, Durham (shorthorn) and Hereford (longhorn) cattle, and Southdown (blackfaced) and Leicester (white faced) sheep.

These beasts are only possible on fairly large holdings, but there are many Johnny Bulls who wish to produce food and consequently have taken to the jobs of raising the best of all foods—poultry.

The Sussex Fowl.

This breed is probably the most contented of all farmers' fowls, and is deservedly popular as it does not fly up on haystacks, trees and roofs and is easily kept out of barns, etc. Being of robust habit, nearly disease-proof, carrying abundance of juicy white flesh, fair layer, good sitter and careful mother, these characteristics appeal to the mixed farmer.

Why the "Light" variety has become the most popular is hard to understand, as the "Red" and "Speckled" are of equal utility merit. Perhaps they are easier to breed to color, like the Light Brahma and Columbian Wyandotte?

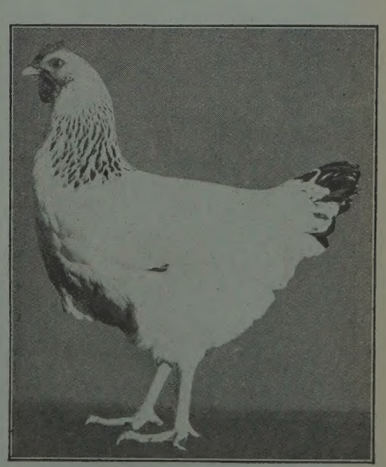
Some egg-test records show quite payable returns can be made from the Sussex, and when considering flesh production as well, it proves one of the best all rounders. It is probably the second best for crossing with the Indian Game male for production of roasters.

The fact that they are meat producers must never be lost sight of, consequently the body must be long, deep and broad and the breast extended back and front. Sometimes specimens win at shows, because of their feather markings, but should not do so, if the mentioned points are absent: this applies also to other breeds.

Generally, the females are better shaped than the males. How important therefore is it, to use only typical males for breeding. They should have stout, fairly short, round pearly-white legs and toes, these indicating quality of flesh—legs set straight and well apart. A neat small single comb, orange eye, set on a head matching proportionately in size to the body, makes for idealism.

The flat back, with its tail really a prolongation, gives the bird an extra long appearance. In the male the tail is often up a little. In the "Light" variety, purity of white is essential, being free from ticking. Strange to relate a pullet may show ticking, but as a hen should moult out quite clear.

The tail, neck and parts of the wings are the only black feathers, which should be black to the skin, fringed only with white. The red and speckled varieties have a slate or bluish undercolor with surface color markings as for the breed.



Overport Stud Poultry Farm's Light Sussex Hen, which secured Best Utility Sussex at Oakleigh Poultry Society's 1937 Show.

Printed by the Horticultural Press Pty. Ltd. for the Fruit World Pty. Ltd., 78a Victoria St., Melbourne. Phones: F 2656, F 2657; and at 439 Kent St., Sydney.

Spring Frosts

Combating Damage in S.A.

IN order to obviate recurring losses to growers from Spring frosts in certain defined areas of the Waikerie Irrigation Settlement, S.A., a meeting of growers was held in July, 1935, when methods of combating frost were outlined by Mr. W. S. Nicholls, of the Shell Oil Company, Mr. N. R. Quinn, of the Department of Agriculture, and Mr. F. R. Francis, a grower. At this meeting a Bureau Frost Committee was appointed to assist growers in minimising frost losses.

A method of alarm signals was devised by which, with the co-operation of the Postal Department and local telephone exchanges, growers would be notified of an alarm of frost. Three electrically-controlled alarms were installed on the Settlement in selected orchards in the south, south-east and south-west. Upon warning being given by the finely adjusted alarms, the telephone operators telephoned all subscribers and recorded the receipt of the warning.

It is claimed that the service was satisfactorily effective in 1935 and that damage from Spring frosts was definitely checked. Again, in the December-October period in 1936 the alarm system was reported as definitely reliable, resulting in the saving of crops through the timely warning of eight frosts.

Methods of Combating Frosts.

But the warning is only the first stage. The grower, receiving the warning, has then to fight the frost on his own property. In explaining the operation, Mr. F. B. Harden, Secretary of the Committee, writing in the "S.A. Journal of Agriculture," explains that the grower places his oil burners about the area to be protected ready for lighting. These burners contain approximately 1½ gallons to height of damper, consuming 1 gallon every 2 hours, without dampers. The lighter is also in readiness, pending the alarm signal. It is considered that 200 to 250 oil-burners are enough for one man to attend to; if more are used, it would be necessary to have assistance. A reserve of oil in drums is also on hand for re-filling, should the burning period be a lengthy one. The plant required per acre is as follows:—60 oil burners, 120 gallons of oil, 3 40-gallon oil drums, a lighter.

Thermometers should be placed about in order that the fall of temperature may be noted, and burners used accordingly. A check thermometer or so placed outside of the protected area is necessary, otherwise unnecessary oil may be used or fires damped down too soon and the crop ruined. Once the initial outlay is made and care taken of the plant, it will last quite a number of years.

Thermometers should be placed 2 ft. 6 in. above ground. The procedure usually followed is to light every alternate burner first with the dampers on (a gallon of oil will then last 4 to 4½ hours).

If the temperature is still falling the other burners are lighted with dampers on; if still falling, dampers are removed and the fight is on in earnest. It is by the careful watching of thermometers that economy in oil can be achieved, such as the replacing of dampers when a safety degree of heat is reached and can be held by so doing. However, a grower would be ill-advised to risk a falling temperature to save a little oil; he would naturally judge the position by reading his check thermometer in comparison with those among the burners.

In order to obtain reliable information in regard to frost control, our Committee circularised growers concerned, and from the replies received the following recommendations are made for frost combating to be successful:—That not less than 50 (preferably 60) oil burners be used per acre. That it is better to keep the temperature up than endeavour to raise it, i.e., to light the burners at not lower than 31 deg. That it is possible to maintain a temperature of 6-7 deg. above check thermometer. That though it is stated that vines will stand at least 1 deg. of frost, it is advisable to maintain the temperature at 32 deg. or over. That though soil conditions may minimise frost damage, it is inadvisable to rely upon same to hold the temperature above danger point. That damage to crops will occur if lighting of burners is delayed with temperature falling. That a dangerous period at all times is the time between dawn and sunrise and for period thereafter. That it is unwise to put out burners at sunrise if thermometers are still showing degrees of frost.

It is noticeable from replies received to our questionnaire, that wherever a grower allowed the temperature to fall to a low degree before lighting, or put out his burners too soon, a heavy loss of crop resulted. This appears to be quite a definite result arising from the severe frost of September 25, 1936, and should be borne in mind by all growers contemplating frost fighting here or elsewhere.

The question has arisen as to whether the expense of frost combating is warranted by the crop save, but the figures supplied by one grower show that it cost £16/2/8 for oil to protect 5½ acres during this season, when burners were used effectively on eight occasions, or approximately £2/18/8 per acre; which expense, though high, was warranted by the save made, and in ordinary seasons (1936 was abnormal in regard to Spring frosts) would by no means reach this figure.

The Agricultural Bureau Frost Committee is pleased at the result of their organising of frost combating methods on this settlement, and believe that the success attained here will be an encouragement to growers to endeavour to overcome the frost menace in other areas. **"Eternal vigilance is the price of safety"** in this as in other matters. The thermometers will tell you what to do. Watch them; don't just light the burners and go back to bed; temperatures may still fall and the crop be ruined even after others have rendered a service of warning.

The anti-tobacco crank was holding forth.

"You go into a tobacconist's shop," he bawled, "you place sixpence on the counter, you get a packet of cigarettes—and you get more. For in the wake of those cigarettes come beer, whisky, brandy and—"

"'Struth!" interrupted one of his listeners, "who's your blinkin' tobacconist?"

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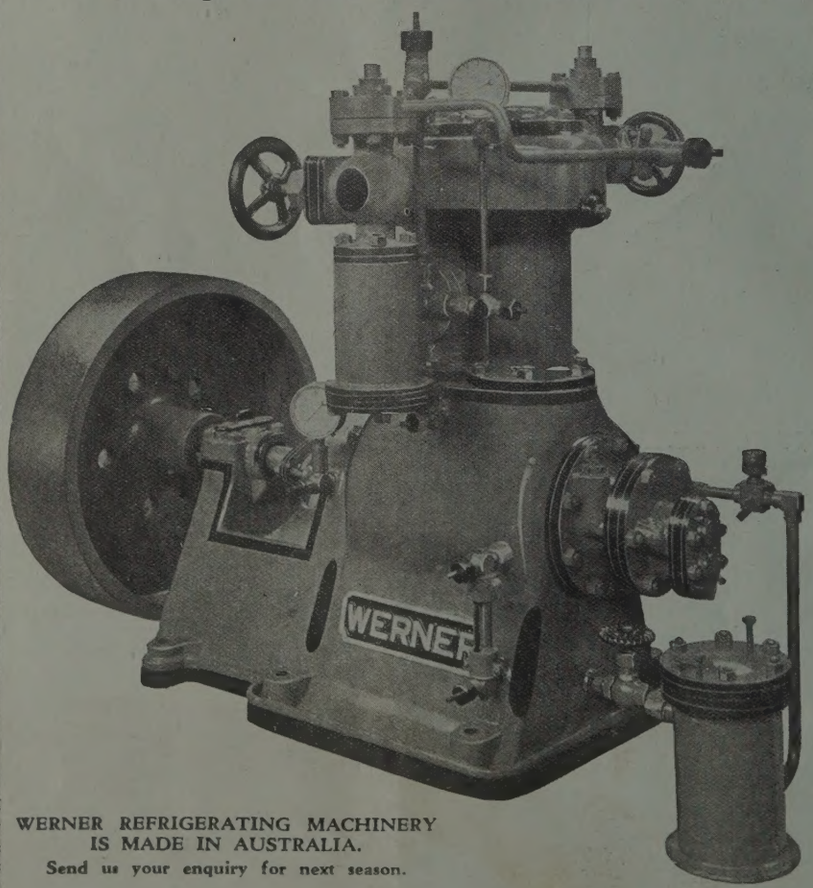

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